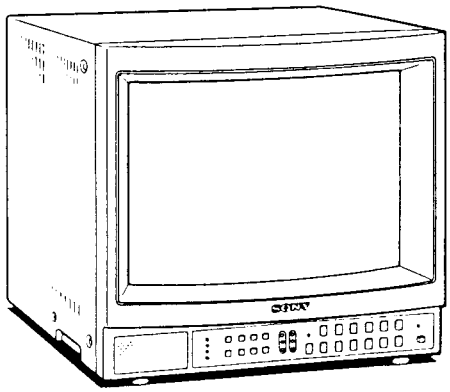
PVM-1440QM/1442QM/1444QM

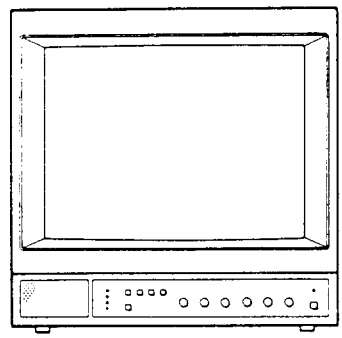
SERVICE MANUAL

AEP Model

PVM-1440QM
Chassis No. SCC-C57A-A
PVM-1442QM
Chassis No. SCC-C56A-A
PVM-1444QM
Chassis No. SCC-C55A-A



(PVM-1440QM/1442QM)



(PVM-1444QM)

SPECIFICATIONS

Video signal

Frequency response
- Line input: More than 7 MHz (−3 dB)
- Y/C input: More than 8 MHz (−3 dB)
- Component input (Y/R-Y/B-Y): More than 8 MHz (−3 dB)
- R.G.B. input (analog): More than 9 MHz (−3 dB)

Chrominance subcarrier attenuation
- 3.58 MHz: Less than −30 dB (comb filter)
- 4.43 MHz: Less than −36 dB (trap filter)

Band pass
- 3.58 MHz: 2 MHz equiband
- 4.43 MHz: 2 MHz equiband

Chrominance/luminance time error
- Composite: Less than ±100 ns
- Y/C Video: Less than ±50 ns
- Component: Less than ±50 ns

Aperture correction
- −4.5 to +6.5 dB (at 4.5 MHz)

Synchronization: AFC time constant: 1 msec

Line pull range
- Horizontal: ±500 Hz
- Vertical: 8 Hz

Picture performance

Normal scan: 7% overscan of CRT effective screen area

Under scan: 3% underscan of CRT effective screen area

H. linearity error: Less than 4%

V. linearity error: Less than 5%

Convergence
- Central area: 0.6 mm
- Peripheral area: 0.8 mm

Raster size stability
- H: 1.0%, V: 1.5%

High voltage regulation
- 3%

Audio output: 0.6 W (Max.)

CRT
- PVM-1444QM/PVM-1442QM: EBU
- PVM-1440QM: P-22

Chromacity coordinates (EBU only)

	X	Y
Red	0.640	0.330
Green	0.290	0.600
Blue	0.150	0.060

(tolerance ±0.01)

Color temperature
- 6,500°K/9,300°K (+8MPCD), selectable

AC regulation range
- 220 - 240 V AC, 50/60 Hz

Power consumption
- Approx. 75 Wh

Inputs

For all models

VIDEO IN: BNC connector
AUDIO IN: phono jack
VTR: 8-pin connector
Y/C-INPUT
- VIDEO: 4-pin connector
- AUDIO: phono jack

PVM-1444QM only

EXT SYNC: BNC connector
- composite sync 1-4 Vp-p, negative, 75 ohms terminated, automatically released when cable is connected to the output connector.

ANALOG RGB/COMPONENT: BNC connector
- R, G, B and Y channels: 0.7 Vp-p, ±6 dB, non composite
- R-Y and B-Y channels: 0.525 Vp-p, ±6 dB
- (Standard color bar signal of 75-percent chrominance)
- When the composite signal is fed to the G or Y channels, the monitor can be activated in the internal sync mode.
- 75 ohms terminated, automatically released when a cable is connected to the output connector.

CTRL S: Minijack

PVM-1442QM only

EXT SYNC: BNC connector
- composite sync 1-4 Vp-p, negative, 75 ohms terminated, automatically released when cable is connected to the output connector.

ANALOG RGB: BNC connector
- 0.7 Vp-p, ±6 dB, non composite
- 75 ohms terminated, automatically released when cable is connected to the output connector.

DIGITAL RGB: 9-pin connector

CTRL S: Minijack

PVM-1440QM

ANALOG RGB signal through AV: 0.7 Vp-p, ±6 dB, non composite, 75 ohms terminated

— Continued on next page —

MICROFILM

TRINITRON® COLOR VIDEO MONITOR

SONY®

Outputs

For all models

VIDEO OUT: BNC connector
Loop-through
AUDIO OUT: Phono jack
Loop-through

PVM-1444QM only

EXT SYNC: BNC connector
Loop-through
ANALOG RGB/COMPONENT: BNC connector
Loop-through
CTRL S: Minijack
Loop-through

PVM-1442QM only

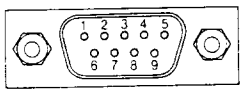
EXT SYNC: BNC connector
Loop-through
ANALOG RGB: BNC connector
Loop-through
CTRL S: Minijack
Loop-through

General

Dimensions	Approx. 346 × 340 × 412 mm (w/h/d) (13⅝ × 13½ × 16¼ inches)
Weight	Approx. 16.5 kg (36 lb 6 oz)

Pin assignment

DIGITAL RGB connector (9-pin)



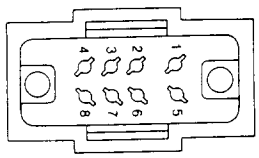
Pin No.	Signal	Signal level
1	GND (ground)	GND
2	GND for the signal	GND
3	Red input	Positive polarity (TTL level)
4	Green input	〃
5	Blue input	〃
6	Intensity	〃
7	NC (no connection)	—
8	H-SYNC	Positive or negative polarity (TTL level)
9	V-SYNC	Same polarity as H-SYNC (TTL level)

Note

If the intensity function of Pin No. 6 is not used, set the internal switch on the Qd board to the B position, and connect the Pin No. 6 to the GND. With this setting, when the positive intensity signal synchronized to the characters on the screen is fed, the luminance of the characters will be increased.

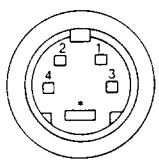
If the specific intensity function, such as that of an IBM microcomputer, is used, set the internal switch on the Qd board to the A position, and feed the intensity control signal to Pin No. 6.

VTR connector (8-pin)



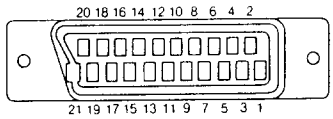
Pin No.	Signal	Description
1	Audio input	−5 dBs, high input impedance (more than 47 kilohms)
2	Video input	Composite 1 Vp-p, sync negative, 75 ohms
3	GND	GND
4	NC	—
5	GND	GND
6	GND	GND
7	GND	GND
8	GND	GND

Y/C (Y/C separate) INPUT connector (4-pin)



Pin No.	Signal	Description
1	Y-input	1 Vp-p, sync negative, 75 ohms
2	CHROMA sub-carrier-input	300 mVp-p, burst Delay time between Y and C: within 0±100 nsec., 75 ohms
3	GND for Y-input	GND
4	GND for CHROMA-input	GND
*	(Slot for internal switch)	Press the switch inside this slot. The signal from Y/C-INPUT connector has priority over the one from VTR (8-pin) connector.

AV (EURO-TV) connector (21-pin)



Pin No.	Signal	Description
1	Audio output B (right)	Standard level: 0.5 Vrms Output impedance: Less than 1 k ohm *
2	Audio input B (right)	Standard level: 0.5 Vrms Input impedance: More than 10 k ohms *
3	Audio output A (left)	Standard level: 0.5 Vrms Output impedance: Less than 1 k ohm *
4	GND for audio	GND
5	GND for blue input	GND
6	Audio input A (left)	Standard level: 0.5 Vrms Input impedance: More than 10 k ohms *
7	Blue input	0.7 V ±3 dB, 75 ohms
8	Function select (AV control)	High state (9.5 – 12 V): Peri mode Low state (0 – 2 V): TV mode Input impedance: More than 10 k ohms Input capacitance: Less than 2 nF
9	GND for green input	GND
10	NC	
11	Green input	(Same as Pin 7)
12	NC	
13	GND for red input	GND
14	GND for blanking input	GND
15	Red input	(Same as Pin 7)
16	Blanking input	High state (1 – 3 V) Low state (0 – 0.4 V) Input impedance: 75 ohms
17	GND for video output	GND
18	GND for video input	GND
19	Video output * *	1 V ± 3 dB, 75 ohms Sync: 0.3 V (±3 dB)
20	Video input	1 V ±3 dB, 75 ohms Sync: 0.3 V (±3 dB)
21	Common GND (plug, shield)	GND

* at 20Hz – 20 kHz
* * Outputs the video signal fed through the LINE A connector, when the AV input mode is selected.

Design and specifications subject to change without notice.

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WARNING !!

AN ISOLATION TRANSFORMER SHOULD BE USED DURING ANY SERVICE TO AVOID POSSIBLE SHOCK HAZARD, BECAUSE OF LIVE CHASSIS.
THE CHASSIS OF THIS RECEIVER IS DIRECTLY CONNECTED TO THE AC POWER LINE.

SAFETY-RELATED COMPONENT WARNING !!

COMPONENTS IDENTIFIED BY SHADING AND MARK ⚠ ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY. CIRCUIT ADJUSTMENTS THAT ARE CRITICAL TO SAFE OPERATION ARE IDENTIFIED IN THIS MANUAL. FOLLOW THESE PROCEDURES WHENEVER CRITICAL COMPONENTS ARE REPLACED OR IMPROPER OPERATION IS SUSPECTED.

SECTION 1
GENERAL

1-1. FEATURES

This chart shows the various features which your model has (indicated as "Yes").

Features	PVM-1444QM	PVM-1442QM	PVM-1440QM
Automatic white balance circuit	Yes	Yes	Yes
EBU phosphor	Yes	Yes	No
Black-tinted Trinitron tube	No	No	Yes
Super Fine Pitch Trinitron picture tube	Yes	Yes	No
Analog RGB/component input/output	Yes	No	No
Analog RGB input/output	No	Yes	No
Digital RGB input (9-pin)	No	Yes	No
Y/C input (4-pin DIN)	Yes	Yes	Yes
VTR input (8-pin)	Yes	Yes	Yes
Control S input/output	Yes	Yes	No
Automatic release of BNC-type input connector termination	Yes	Yes	Yes
Color systems available	PAL, SECAM, $NTSC_{3.58}$ $NTSC_{4.43}$		
Comb filter	Yes	Yes	Yes
Blue only mode	Yes	Yes	Yes
Underscan mode	Yes	Yes	No
Horizontal/vertical delay mode	Yes	Yes	No
External sync input/output	Yes	Yes	No
Color temperature selector	Yes	Yes	Yes
Light-touch picture adjustment buttons	Yes	Yes	No
AV (EURO-TV) connector (21-pin)	No	No	Yes
EIA standard 19-inch rack mounting	Yes	Yes	Yes

Automatic white balance circuit
The automatic white balance circuit compensates for the beam distortion, secular distortion of the cathode-ray tube, etc., and always reproduces the same white display on the screen. This allows an extended use of the monitor.

Super Fine Pitch Trinitron picture tube
(PVM-1444QM/1442QM only)
The Super Fine Pitch Trinitron picture tube (0.25 mm aperture grill) gives high resolution picture. Horizontal resolution is more than 600 TV lines at the center of the picture. When used as a character display, up to 2,000 characters (80 characters/line × 25 lines) can be displayed with great clarity.

Analog RGB/component connector (PVM-1444QM only)
Analog RGB and component signals of a video equipment can be input through this connector. The signals are selected by the COMPO/RGB selector on the rear panel.

Analog RGB connector (PVM-1442QM only)
Analog RGB signal of a video equipment can be input through this connector.

Digital RGB input connector (PVM-1442QM only)
Digital RGB signal from a microcomputer can be input through this connector.

Y/C input connector
The video signal split into the chrominance signal (C) and the luminance signal (Y) can be input through this connector, eliminating the interference between the two signals which tends to occur in a composite video signal and assuring the video quality.

VTR input connector
When connected to a VTR having the 8-pin TV connector, video and audio signals can be fed through this connector with a single cable.

Control S connector (except PVM-1440QM)
When this connector is connected to the "control S" output of other equipment, the remote controls of the aperture, brightness, chroma, phase, contrast and volume settings are possible.

Automatic release of BNC-type connector termination
The BNC-type input connector is terminated at 75 ohms inside when the BNC-type output connector is open. When a cable is connected to the BNC-type output connector, the 75-ohm termination is automatically released, and the signal input through the IN connector is output from the corresponding OUT connector.

Four color systems available
The monitor can display PAL, SECAM, $NTSC_{3.58}$ and $NTSC_{4.43}$* signals. The appropriate color system is selected automatically.
* A signal of $NTSC_{4.43}$ is obtained by playing back NTSC-recorded video cassettes with a video tape recorder/player especially designed for use with this system.

Comb Filter
When NTSC video signals are received, a comb filter activates to increase the resolution, resulting in fine picture detail without color spill or color noise.

Blue only mode
In the blue only mode, an apparent monochrome display is obtained with all three cathodes driven with a blue signal. This facilitates color saturation and phase adjustments and observation of VTR noise.

Underscan mode (except PVM-1440QM)
The signal normally scanned outside of the screen can be monitored in the underscan mode.

Note

The bright scanning lines which may appear on the top edge of the screen when the monitor is in the underscan mode are caused by an internal test signal, rather than the input signal.

Horizontal/vertical delay mode (except PVM-1440QM)
The horizontal and vertical sync signals can be checked simultaneously in the H/V delay mode.

External sync input (except PVM-1440QM)
When the EXT SYNC (or ANALOG/DIGITAL (EXT SYNC)) button is depressed, the monitor can be operated on the sync signal supplied from an external sync generator.

Color temperature selector
Color temperature of either 9,300°K or 6,500°K is selectable with the COLOR TEMP selector. For precise adjustment, use the BIAS and GAIN adjustment controls (except PVM-1440QM).

Light-touch picture adjustment buttons (except PVM-1440QM)
The aperture, brightness, chroma, phase, contrast and volume buttons can be adjusted by touching the buttons lightly. The adjusted settings will be stored in memory even when the monitor is turned off.

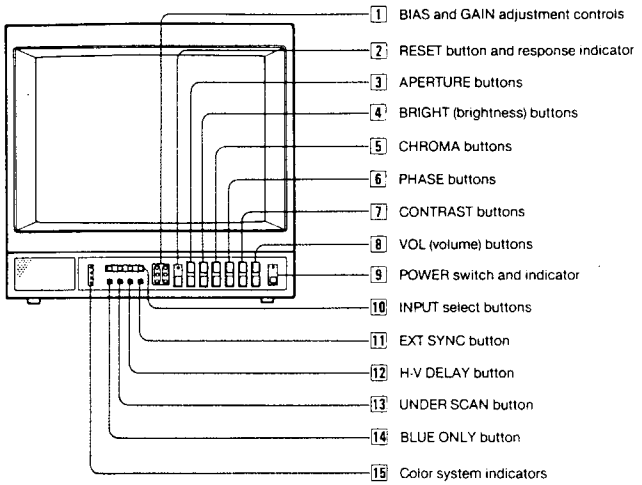
AV (EURO-TV) connector (PVM-1440QM only)
Analog RGB signals can be input through the 21-pin AV (EURO-TV) connector. This allows connection of peripheral equipments such as decoders.

Superimposition (PVM-1440QM only)
The data fed through the AV (EURO-TV) connector can be superimposed on the picture from the LINE A, LINE B or Y/C/VTR input.

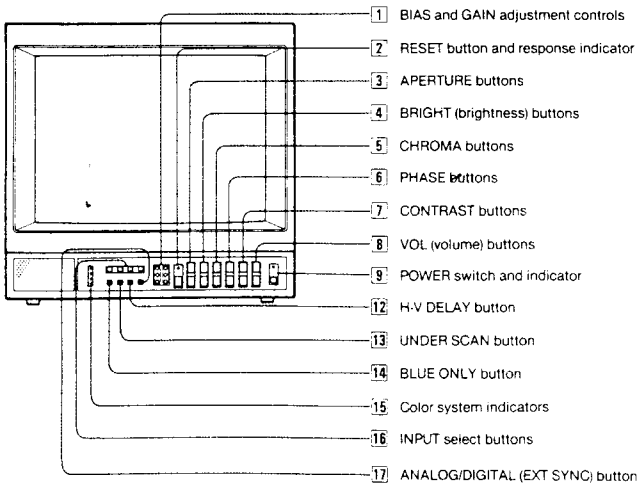
EIA standard 19-inch rack mounting
By using an optional MB-502A mounting bracket, the monitor can be mounted in an EIA standard 19-inch rack. An optional SLR-102 slide rail is also available. For details on mounting, see the appropriate instruction manual.

1-2. LOCATION AND FUNCTION OF PARTS AND CONTROLS

Front panel PVM-1444QM


1 BIAS and GAIN adjustment controls
2 RESET button and response indicator
3 APERTURE buttons
4 BRIGHT (brightness) buttons
5 CHROMA buttons
6 PHASE buttons
7 CONTRAST buttons
8 VOL (volume) buttons
9 POWER switch and indicator
10 INPUT select buttons
11 EXT SYNC button
12 H-V DELAY button
13 UNDER SCAN button
14 BLUE ONLY button
15 Color system indicators

Front panel PVM-1442QM


1 BIAS and GAIN adjustment controls
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5 CHROMA buttons
6 PHASE buttons
7 CONTRAST buttons
8 VOL (volume) buttons
9 POWER switch and indicator
12 H-V DELAY button
13 UNDER SCAN button
14 BLUE ONLY button
15 Color system indicators
16 INPUT select buttons
17 ANALOG/DIGITAL (EXT SYNC) button

1 BIAS and GAIN adjustment controls
Used for white balance adjustment.
Gain and BIAS controls are provided for the R (red), G (green) and B (blue) screens.
BIAS: Adjust the white balance and brightness of the screen at the lowlight with these controls.
GAIN: Adjust the white balance and contrast of the screen at the highlight with these controls.

2 RESET button and response indicator
Press to return the PHASE, CHROMA, BRIGHT and APERTURE control settings to the factory set levels.
The response indicator flashes when the above buttons or the RESET button is pressed.

3 APERTURE buttons
Press + for more sharpness or – for less.

4 BRIGHT (brightness) buttons
Press + for more brightness or – for less.

5 CHROMA buttons
Press + for more color intensity or – for less.

6 PHASE buttons
This button is effective only for the NTSC3.58 and NTSC4.43 color system.
Press GRN (green) to make the skin tones greenish or PUR (purple) to make them purplish.

Note

The APERTURE, CHROMA, PHASE control settings have no effect on the pictures of analog RGB or digital RGB signals.

7 CONTRAST buttons
Press + to make the contrast, color intensity and brightness stronger or – to make them weaker.

8 VOL (volume) buttons
Press + for more volume or – for less.

9 POWER switch and indicator
Depress to turn the monitor on.
The indicator will light up in green.
Press the switch again to turn the monitor off.

10 INPUT select buttons
Press to select the program to be monitored.
A: for a signal fed through the LINE A connectors.
B: for a signal fed through the LINE B connectors.
Y/C/VTR: for a signal fed through the Y/C-INPUT connectors or VTR connector.
When both the Y/C-INPUT and VTR connectors are connected to video equipment, the input signal fed through the Y/C-INPUT connector has priority over the one fed through the VTR connector.
ANALOG RGB/COMPONENT: for a signal fed through the ANALOG RGB/COMPONENT connectors.
For connection, refer to the explanation of ANALOG RGB/COMPONENT connectors.

11 EXT SYNC (external sync) button
Normally keep this button released (INT). The monitor operates on the sync signal from the displayed composite video signal.
To operate the monitor on an external sync signal fed through the EXT SYNC connector on the rear panel, depress the button (EXT).

12 H-V DELAY button
Depress to observe the horizontal and vertical sync signals at the same time.
The horizontal sync signal is displayed in the left quarter of the screen; the vertical signal is displayed near the center of the screen.

13 UNDER SCAN button
Depress for underscanning. The display size is reduced by approximately 3% so that four corners of the raster are visible.

14 BLUE ONLY button
Depress to turn off the red and green signals. A blue signal is displayed as an apparent monochrome picture on the screen. This facilitates "chroma" and "phase*" control adjustments and observation of VTR noise.

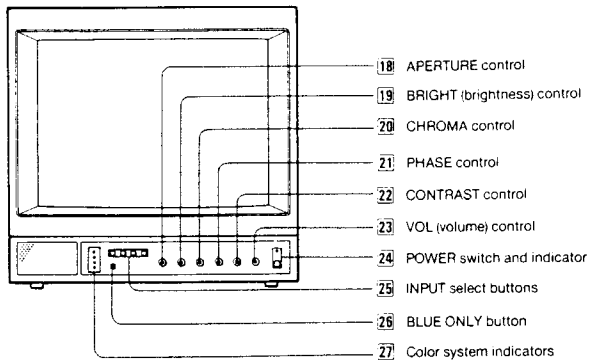
* "Phase" control adjustment is effective only for the NTSC signals.

15 Color system indicators
The indicator of the color system being received lights up in red.

16 INPUT select buttons
Press to select the program to be monitored.
A: for a signal fed through the LINE A connectors.
B: for a signal fed through the LINE B connectors.
Y/C/VTR: for a signal fed through the Y/C-INPUT connectors or VTR connector.
When both the Y/C-INPUT and VTR connectors are connected to video equipment, the input signal fed through the Y/C-INPUT connector has priority over the one fed through the VTR connector.
RGB: for a signal fed through the ANALOG RGB connectors or DIGITAL RGB connector.

17 ANALOG/DIGITAL (EXT SYNC) button
This button functions as ANALOG/DIGITAL selector and EXT SYNC selector.
As ANALOG/DIGITAL selector
Depress to monitor a signal fed through the ANALOG RGB connectors.
Release to monitor a signal fed through the DIGITAL RGB connector.
For EXT SYNC selector
Depress to operate the monitor on an external sync signal fed through the EXT SYNC connector on the rear panel (EXT).
Release to operate the monitor on the sync signal from the displayed composite video signal (INT).

Front panel PVM-1440QM



18 APERTURE control
Turn toward + for more sharpness or toward – for less.

19 BRIGHT (brightness) control
Turn toward + for more brightness or toward – for less. Normally set this control at the center detent position.

20 CHROMA control
Turn toward + for more color intensity or toward – for less.

21 PHASE control
Turn toward GRN (green) to make the skin tones greenish or toward PUR (purple) to make them purplish.

Note

The APERTURE, CHROMA, PHASE control settings have no effect on the pictures input through the ANALOG RGB IN connector.

22 CONTRAST control
Turn toward + to make the contrast, color intensity and brightness stronger or toward – to make them weaker.

23 VOL (volume) control
Turn toward + for more volume or toward – for less.

24 POWER switch and indicator
Same as 9.

25 INPUT select buttons
Press to select the program to be monitored.
A: for a signal fed through the LINE A connectors.
B: for a signal fed through the LINE B connectors.
Y/C/VTR: for a signal fed through the Y/C-INPUT connectors or VTR connector.
When both the Y/C-INPUT and VTR connectors are connected to video equipment, the input signal fed through the Y/C-INPUT connector has priority over the one fed through the VTR connector.
AV: for a signal fed through the AV (EURO-TV) connector.
To superimpose the data fed through the AV (EURO-TV) connector over the picture being displayed:
1 Press A, B or Y/C/VTR to display the picture on which the data is to be superimposed.
Be sure the SUPERIMPOSE selector on the rear panel is set to ON.
2 Press AV.
The data is superimposed over the picture.

26 BLUE ONLY button
Same as 14.

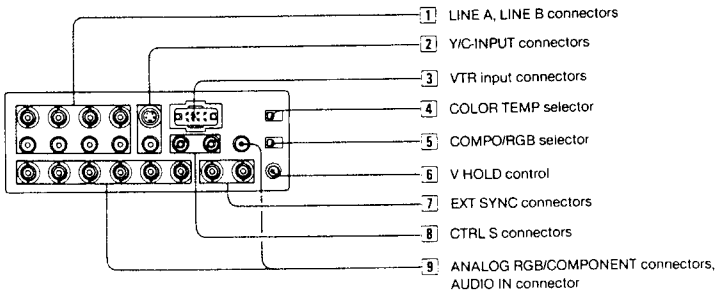
27 Color system indicators
Same as 15.

Picture Adjustment Buttons

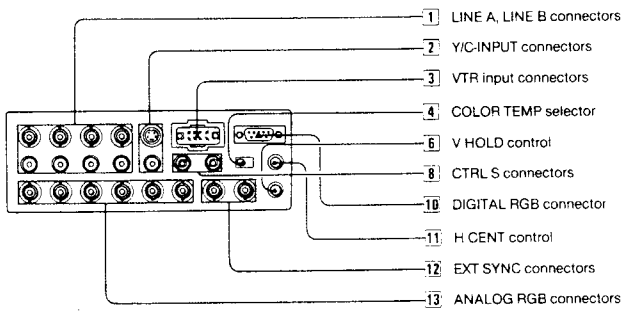
The picture adjustment buttons of each monitor operate in the following input mode (indicated as "Yes").

Model	Input mode	APERTURE	BRIGHT	CHROMA	PHASE	CONTRAST	VOL
PVM-1444QM	• LINE A, LINE B • Y/C • VTR	Yes	Yes	Yes	Yes (NTSC only)	Yes	Yes
	Analog RGB	No	Yes	No	No	Yes	Yes
	Component	Yes	Yes	Yes	No	Yes	Yes
PVM-1442QM	• LINE A, LINE B • Y/C • VTR	Yes	Yes	Yes	Yes (NTSC only)	Yes	Yes
	• Digital RGB • Analog RGB	No	Yes	No	No	Yes	No
PVM-1440QM	• LINE A, LINE B • Y/C • VTR	Yes	Yes	Yes	Yes (NTSC only)	Yes	Yes
	AV (RGB signal only)	No	Yes	No	No	Yes	No

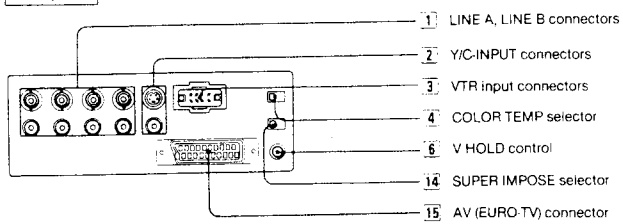
Rear panel PVM-1444QM


1 LINE A, LINE B connectors
2 Y/C-INPUT connectors
3 VTR input connectors
4 COLOR TEMP selector
5 COMPO/RGB selector
6 V HOLD control
7 EXT SYNC connectors
8 CTRL S connectors
9 ANALOG RGB/COMPONENT connectors, AUDIO IN connector

Rear panel PVM-1442QM


1 LINE A, LINE B connectors
2 Y/C-INPUT connectors
3 VTR input connectors
4 COLOR TEMP selector
6 V HOLD control
8 CTRL S connectors
10 DIGITAL RGB connector
11 H CENT control
12 EXT SYNC connectors
13 ANALOG RGB connectors

Rear panel PVM-1440QM


1 LINE A, LINE B connectors
2 Y/C-INPUT connectors
3 VTR input connectors
4 COLOR TEMP selector
6 V HOLD control
14 SUPER IMPOSE selector
15 AV (EURO-TV) connector

1 LINE A, LINE B connectors

Two groups (A and B) of line input connectors for the composite video and audio signals and their loop-through output connectors.
To monitor the input signal fed through these connectors, press the A or B input select button on the front panel.

VIDEO IN (BNC type): Connect to the video output of a video equipment, such as a VTR or a color video camera. For a loop-through connection, connect to the video output of another monitor.
VIDEO OUT (BNC type): Loop-through output of the VIDEO IN connector. Connect to the video input for a VTR or another monitor.
When the cable is connected to this connector, the 75-ohms termination of the input is automatically released, and the signal input to the VIDEO IN connector is output from this connector.
AUDIO IN (phono jack): Connect to the audio output of a VTR or to a microphone via a suitable microphone amplifier. For a loop-through connection, connect to the audio output of another monitor.
AUDIO OUT (phono jack): Loop-through output of the AUDIO IN jack. Connect to the audio input of a VTR or another monitor.

2 Y/C-INPUT connectors (4-pin)

VIDEO: Connect to the Y/C separate output of a video camera or a VTR.
AUDIO: Connect to the audio output of a video camera or a VTR.
To monitor the input signal fed through these connectors, press the Y/C/VTR button on the front panel.

3 VTR input connectors (8-pin)

Line input for the video and audio signals. When connected to the 8-pin TV connector of a VTR, the video and audio playback signal from the VTR can be input through a single cable.
To monitor the input signal fed through this connector, press the Y/C/VTR button on the front panel, with the Y/C-INPUT connectors connected to no outputs.
When both VTR and Y/C-INPUT connectors are connected to video equipment, the input signal fed through the Y/C-INPUT connectors has priority over the one fed through the VTR connectors.

4 COLOR TEMP (temperature) selector

Select the color temperature position, 9300°K or 6500°K.

5 COMPO (component)/RGB selector

Set to COMPO to monitor component signal fed through the R/R-Y, G/Y, B/B-Y connectors.
Set to RGB to monitor analog R/G/B signal fed through the R/R-Y, G/Y, B/B-Y connectors.

6 V HOLD (vertical hold) control

Turn to stabilize the picture if it rolls vertically.

7 EXT SYNC (external sync) connectors (BNC type)

IN: Connect to the output of a sync generator.
To use the sync signal fed through this connector, depress the EXT SYNC button.
OUT: Loop-through output of the SYNC IN connector. Connect to the SYNC input of a video camera.
When the cable is connected to this monitor, the 75-ohms termination of the input is released, and the signal input to the IN connector is output from this connector.

8 CTRL S (control S) connectors (minijack)

For remote control of the APERTURE, BRIGHT, CHROMA, PHASE, CONTRAST and VOL control buttons.
IN: Connect to the "control S" output of other equipment.
OUT: Connect to the CTRL S IN connector of another monitor by using a connecting cord (miniplug⟷miniplug).

9 ANALOG RGB/COMPONENT connectors (BNC type)

R/R-Y IN, G/Y IN, B/B-Y IN:
To monitor the analog R/G/B signal, connect to the analog R/G/B signal outputs of a video camera having no sync signal.
Set the COMPO/RGB selector on the rear panel to RGB and press the ANALOG RGB/COMPONENT button on the front panel. When the EXT SYNC button is released, the monitor operates on the sync signal from the G channel.
To monitor the component signal, connect to the R-Y/Y/B-Y component signal outputs of a BETACAM video camera. Set the COMPO/RGB selector on the rear panel to COMPO and press the ANALOG RGB/COMPONENT button on the front panel. When the EXT SYNC button is released, the monitor operates on the sync signal from the Y channel.

R/R-Y OUT, G/Y OUT, B/B-Y OUT:
Loop-through outputs of the R/R-Y IN, G/Y IN, B/B-Y IN connectors.
For R/G/B signal, connect to the analog R/G/B signal inputs of a video camera.
For component signal, connect to the R-Y/Y/B-Y component signal inputs of a BETACAM video camera.
When the cables are connected to these connectors, the 75-ohms termination of the input is automatically released, and the signal inputs to the R/R-Y IN, G/Y IN, B/B-Y IN connectors are output from these connectors.

AUDIO IN: Connect to the audio output of video equipment when the analog R/G/B or component signal is input.

10 DIGITAL RGB connector (9-pin)
Connect with a microcomputer having a digital (TTL level) RGB video output.
To monitor the input signal fed through this connector, press the RGB button and keep the ANALOG/DIGITAL (EXT SYNC) button released.

Note

For connection, be sure to use an optional SMF-520 connecting cable.

11 H CENT (horizontal centering) control
When a digital R/G/B signal is monitored, turn to center the picture if it is decentered.

12 EXT SYNC (external sync) connectors (BNC type)
IN: Connect to the output of a sync generator.
To monitor the sync signal fed through this connector, depress the ANALOG/DIGITAL (EXT SYNC) button.
OUT: Loop-through output of the SYNC IN connector.
Connect to the SYNC input of a video camera.
When the cable is connected to this connector, the 75-ohms termination of the input is released, and the signal input to the IN connector is output from this connector.

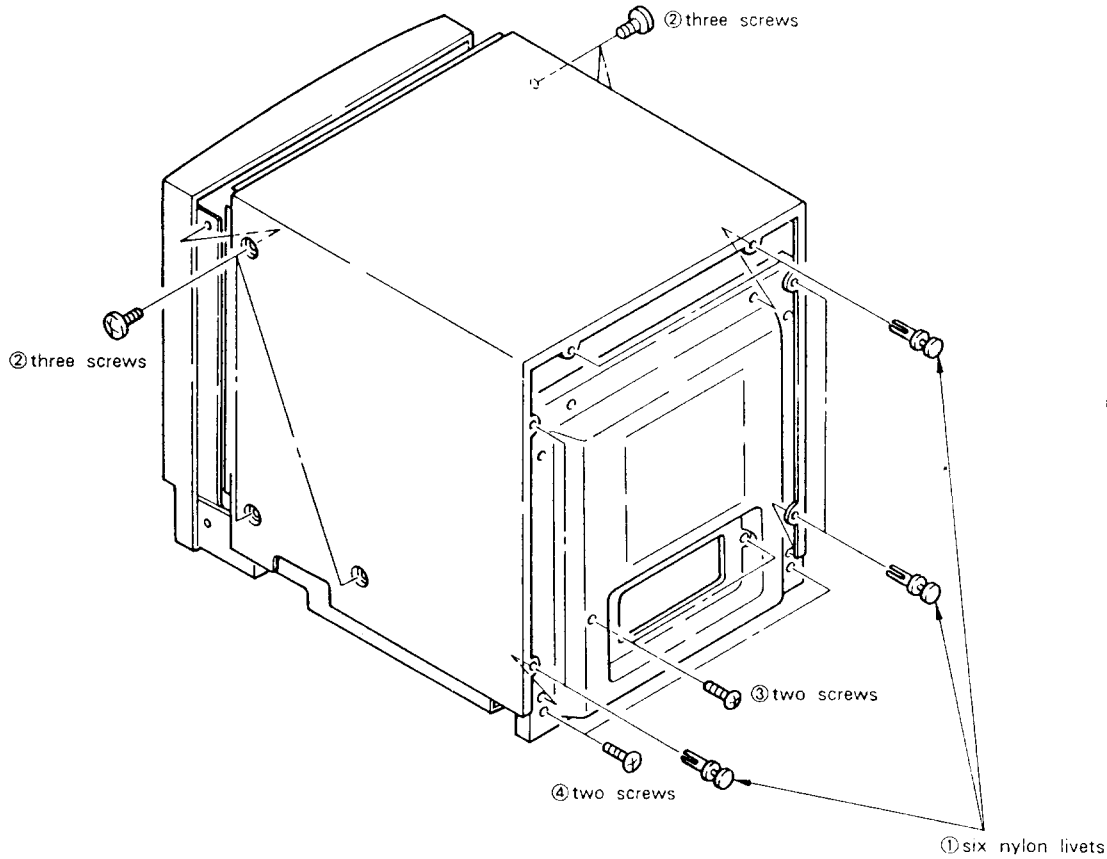
13 ANALOG RGB connectors (BNC type)
R/G/B IN: Connect to the analog R/G/B outputs of a video camera.
To monitor a signal fed through these connectors, press the RGB button and depress the ANALOG/DIGITAL (EXT SYNC) button.
R/G/B OUT: Loop-through outputs of the R/G/B IN connectors. Connect to the analog R/G/B inputs of a video camera.
When the cable is connected to these connectors, the 75-ohms termination of the input is released, and the signal input to the R/G/B IN connectors is output from these connectors.

14 SUPERIMPOSE selector
Normally set to ON.
Set to OFF to display the analog RGB signal fed through the AV (EURO-TV) connector.

15 AV (EURO-TV) connector (21-pin)
Connect to the 21-pin multiconnector of decoders.

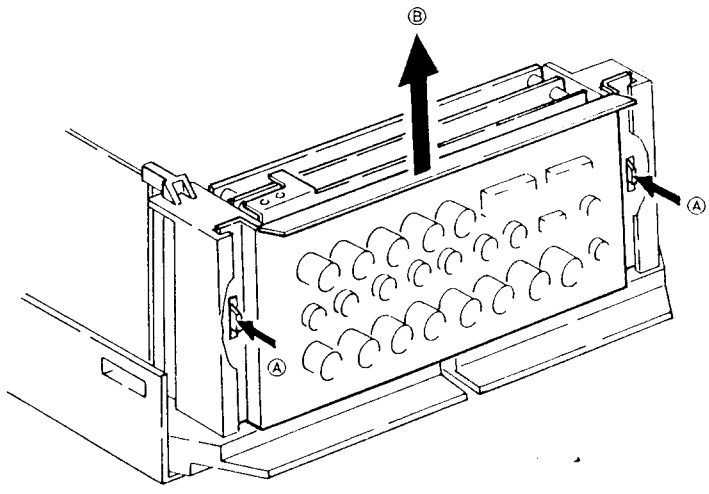
SECTION 2
DISASSEMBLY

2-1. REAR COVER AND TOP COVER REMOVAL



2-2. TERMINAL BOARD REMOVAL

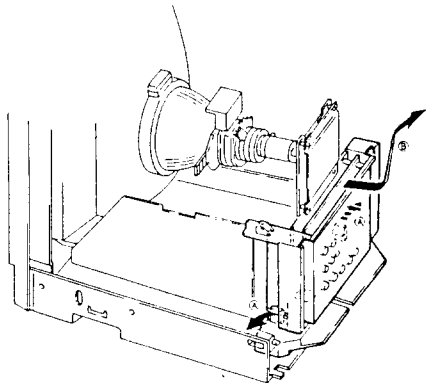
Note : When you remove terminal board, pull out A board a short distance.



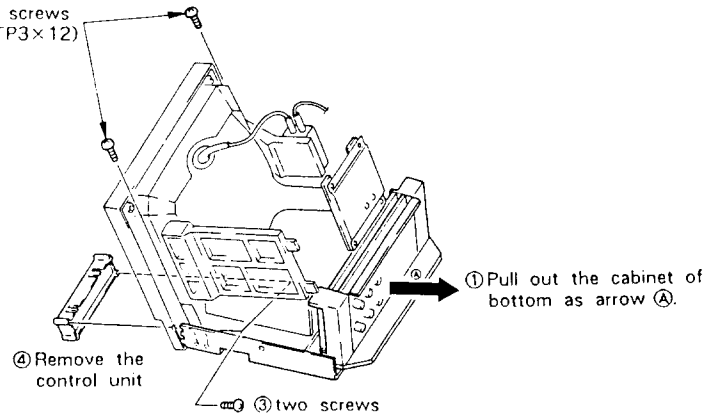
①Remove the terminal board as arrow Ⓑ while push the two claws as arrow Ⓐ.

2-3. BRACKET OF TERMINAL BOARD REMOVAL

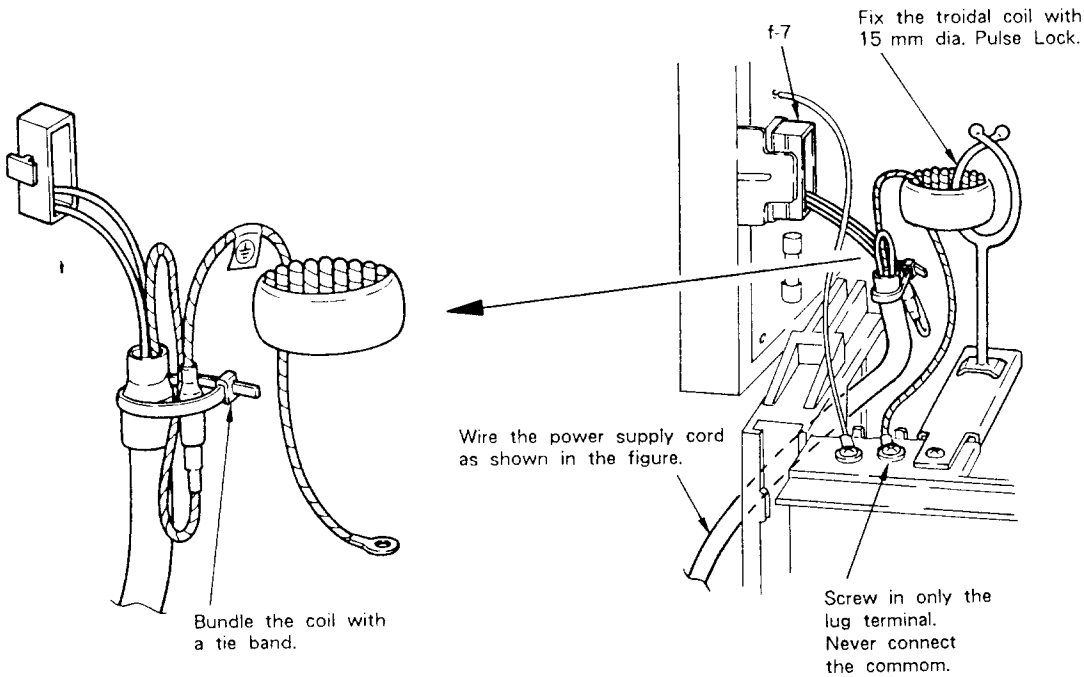
①Remove the bracket of terminal board as arrow Ⓑ while extend two claws as arrow Ⓐ.



2-4. CONTROL UNIT REMOVAL



2-5. NOTE ON WIRING THE TROIDAL COIL AND IT'S PERIPHERAL PART


f-7
Fix the troidal coil with 15 mm dia. Pulse Lock.
Wire the power supply cord as shown in the figure.
Bundle the coil with a tie band.
Screw in only the lug terminal. Never connect the commom.

2-6. PICTURE TUBE REMOVAL

NOTE : Caution for ANODE CAP installation.

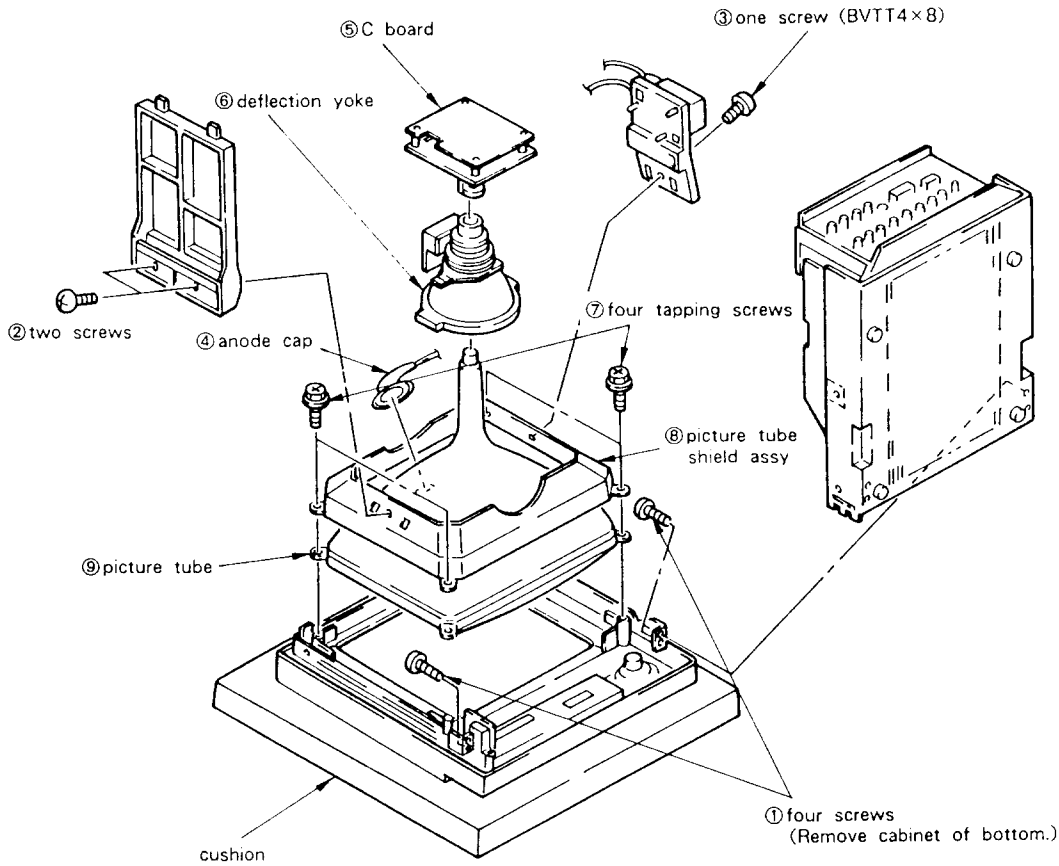
When you replace PICTURE TUBE or FBT, remove RTV on ANODE CAP so that PICTURE TUBE and FBT can be separated. Please adhere picture tube and anode cap in accordance with the following procedure.

ADHERING PROCEDURE OF ANODE CAP.

1. Clean PICTURE TUBE ANODE CAP with ethanol to remove original RTV.
2. Dry clean face with air.
3. Use KE-490RTV (RTV silicone adhesive, SHIN-ETSU CHEMICAL).

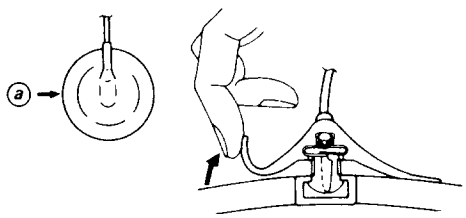
Part. No.	Description
7-322-065-19	Silicone (RTV) KE-490W

4. Install ANODE CAP.
5. Adeguately apply RTV to the entire picture tube anode area, piece the anode cap onto the picture tube and push it down securely so that no air pockets remain beneath the cap.
6. Dry more than 12 hours at room temperature.

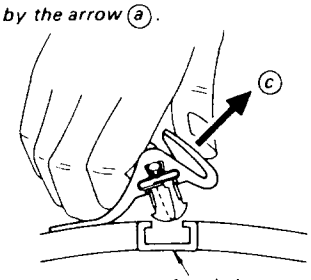


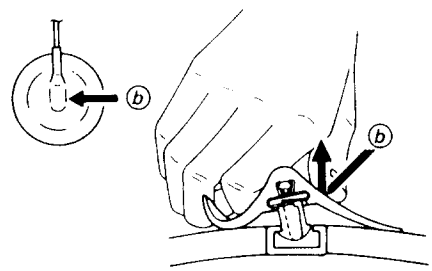
ANODE CAP REMOVAL

- **Removing Procedures**



(1) Turn up one side of the rubber cap in the direction indicated by the arrow (a).





(2) Using a thumb, pull up the rubber cap firmly in the direction indicated by the arrow (b).

(3) When one side of the rubber cap is separated from the anode button, the anode cap can be removed by turning up the rubber cap and pulling up it in the direction of the arrow (c).

SECTION 3
SET-UP ADJUSTMENTS

- The following adjustments should be made when a complete realignment is required or a new picture tube is installed.
- These adjustments should be performed with rated power supply voltage unless ontherwise noted.

The control and switch below should be set as follows unless otherwise noted :

CONTRAST control ····· 80%
BRIGHTNESS control ····· 50%

Perform the adjustments in order as follows :

3-1. Beam Landing
3-2. Convergence
3-3. Focus
3-4. White Balance

Note : Test Equipment Required.

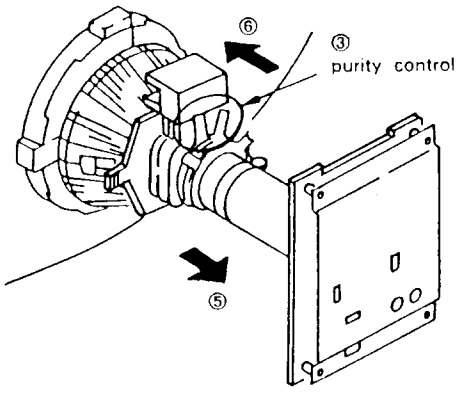
1. Color Bar/Pattern Generator
2. Degausser
3. Color Annalyzer (Minolta)
4. Luminance Level Meter
5. Oscilloscope

Precaution

- Set the side of the unit with the PICTURE TUBE so that it faces east or west in order to reduce the influence of external magnetic force.
- Turn the power switch for the unit ON and erase the magnetic force using a degausser.

3-1. BEAM LANDING

1. Receive an entirely white signal with the pattern generator.
   CONTRAST ····· MAX.
   BRIGHTNESS ····· set easy to observe
2. Adjust the focus and the horizontal convengence roughly.
3. Loosen the deflection yoke mounting screw, and set the purity control to the center as shown in Fig. 3-1.
4. Switch over the pattern generator to green.
5. Move the deflection yoke backward, and adjust with the purity control so that green is in the center and blue and red are at the sides, evenly. (Fig. 3-2)
6. Move the deflection yoke forward, and adjust so that the entire screen becomes green. Repeat 5 to 7 as to red and blue.
7. When landing at the corners is not right, correct by using the magnet. (Fig. 3-3)
8. When the position of the deflection yoke is determined, tighten it with a deflection yoke mounting screw.



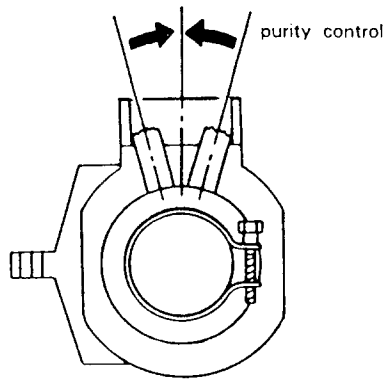


Fig. 3-1

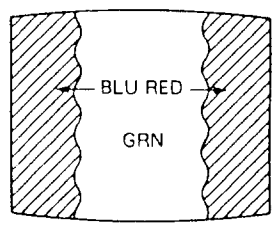


Fig. 3-2

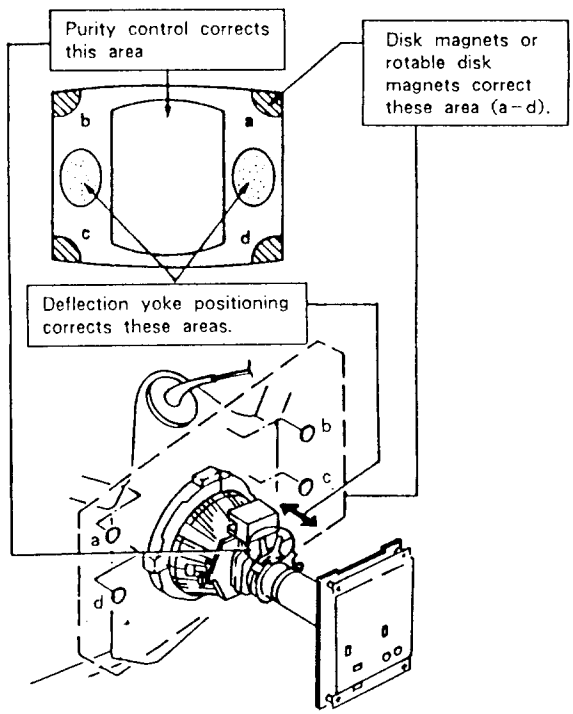


Fig. 3-3

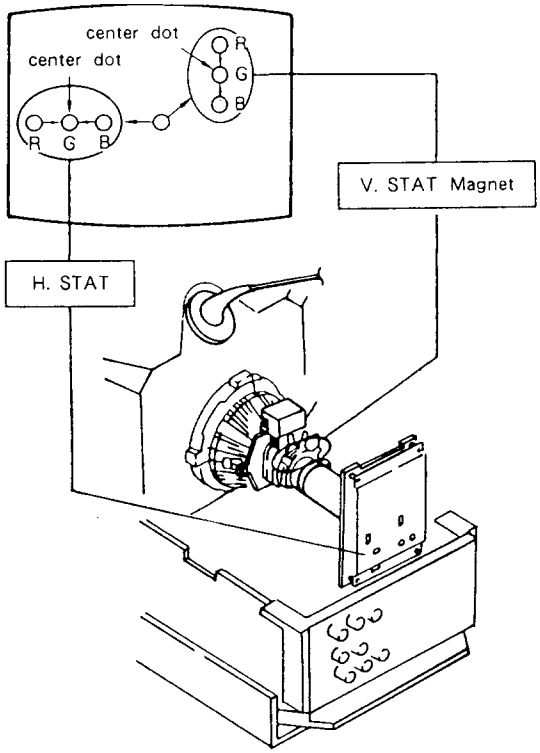
3-2. CONVERGENCE

(1) Horizontal and Vertical Static Convergence Adjustment on the Center of Screen.

- Before starting, perform V. SIZE, V. CENT, H. SIZE, H. CENT and Screen Distortion adjustment rightly.

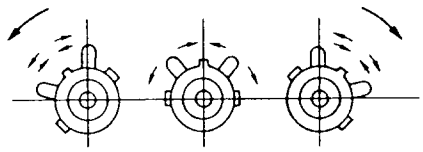
(Static Convergence Adjustment)

1. Receive a dot signal and Set CONTRAST to normal.
2. Adjust H. STAT VR to coincide red, green and blue dots on the center of screen. (Horizontal movement)
3. Adjust V. STAT magnet to coincide red, green and blue dots on the center of screen. (Vertical movement)



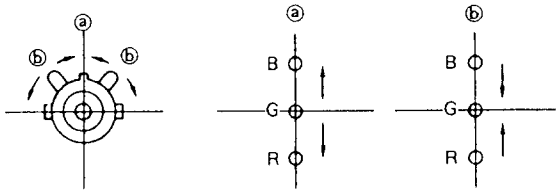
※ If the red, green and blue dots do not coincide on the center of screen with H. STAT VR, perform adjustment using V. STAT at the same time while tracking.

(Tilt the V. STAT magnet and adjust static convergence to open or close the V. STAT magnet.)



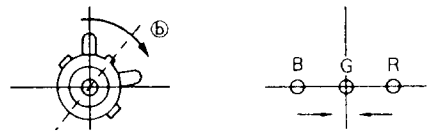
- When the V. STAT magnet is moved in the direction of arrow ⓐ and ⓑ, red, green and blue dots move as shown below.

① When moving the V. STAT Magnet open or close.

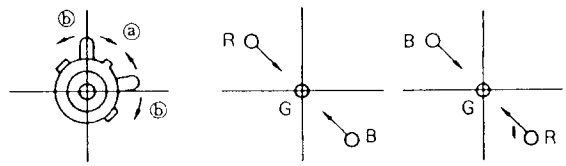


② When moving the V. STAT magnet counterclockwise.

③ When moving the V. STAT magnet clockwise.



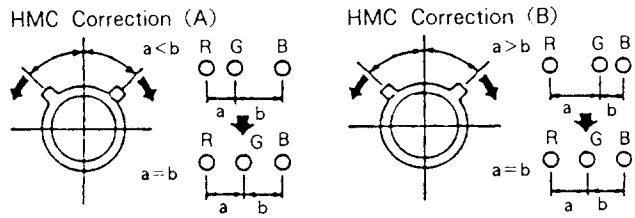
④ When tilt the V. STAT magnet and open or close.



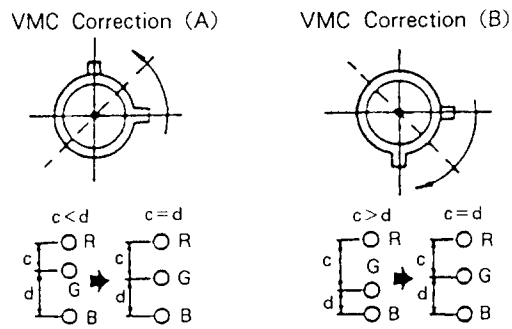
※ If the red and green dots do not coincide with blue dot, adjustment with BMC (6-poles) magnet.

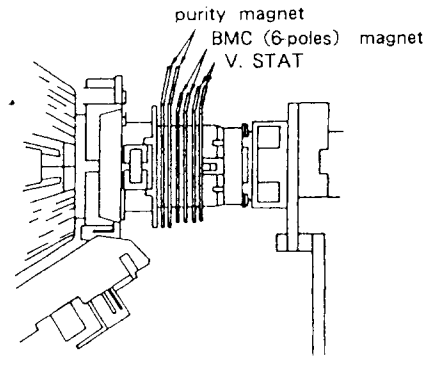
- **HMC and VMC correction for BMC (6-Poles) magnet.**

1. HMC (Horizontal Misconvergence) correction and motion of the Electron Beam with the BMC (6-poles) magnet.



2. VMC (Vertical Misconvergence) correction and motion of the Electron Beam with the BMC (6-poles) magnet.

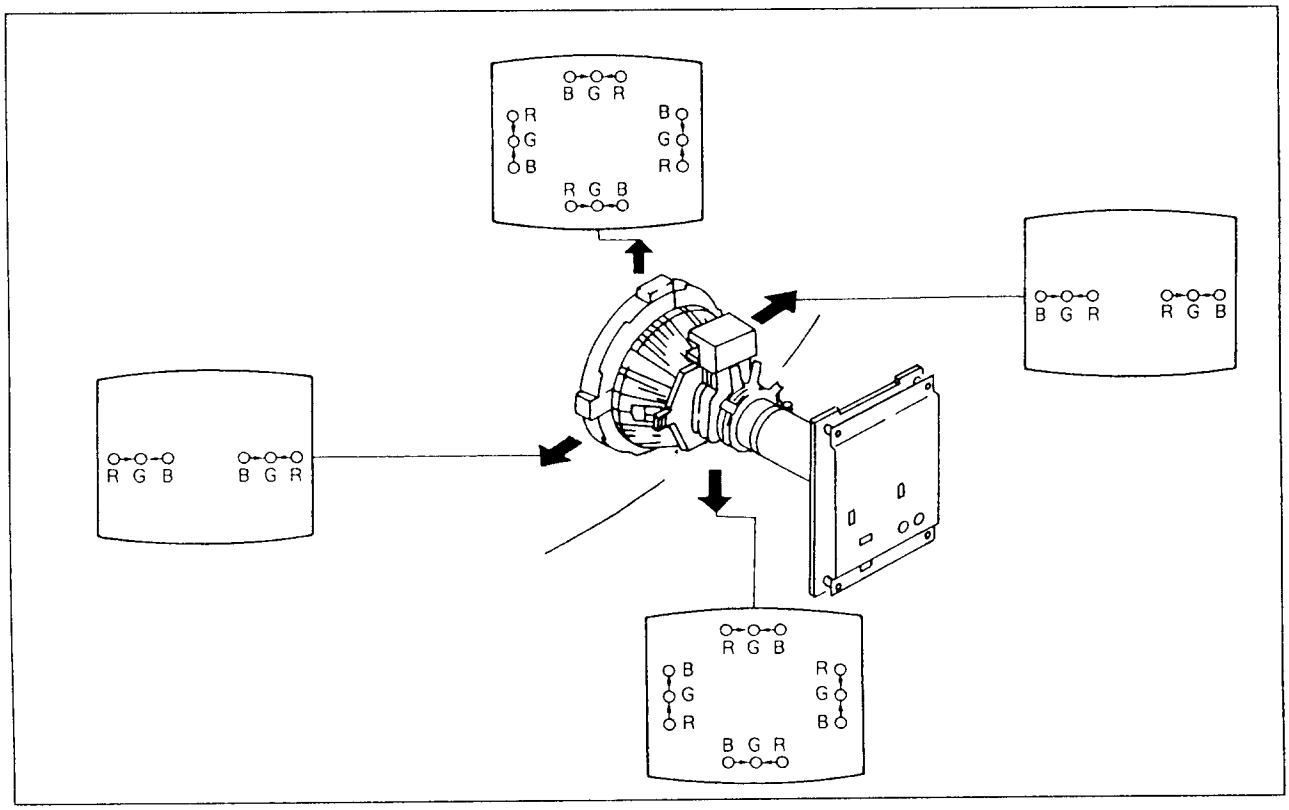




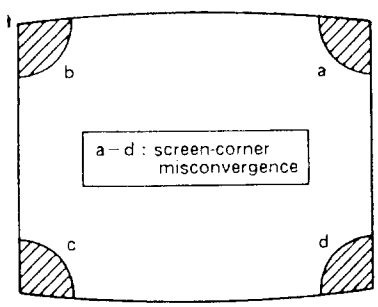
(2) Horizontal and Vertical Dynamic Convergence Adjustment the environs of the Screen

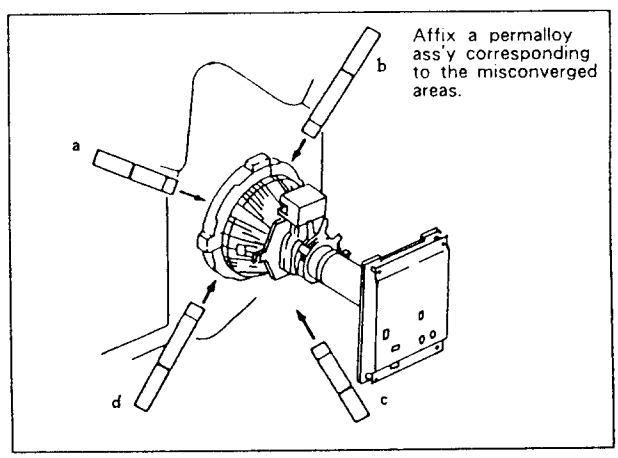
(Dynamic Convergence Adjustment)

1. Loosen deflection yoke screw.
2. Remove deflection yoke spacers.
3. Move the deflection yoke for best convergence.
4. Tighten the deflection yoke screw.
5. Install the deflection yoke spacers.



(3) Screen-corner Convergence





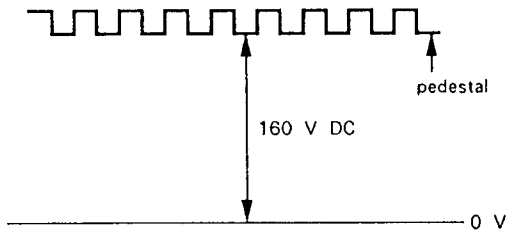
3–3. FOCUS

1. Receive the broadcast.
2. CONTRAST ····· Normal
3. Adjust RV707 so that the focus on the center of screen becomes to the best.

3-4. WHITE BALANCE

(Screen (G2) Voltage)

1. Receive a dot signal with the pattern generator.
2. Switch over COLOR TEMP to 6500° K.
3. Using oscilloscope, adjust with RV1710 (SUB BRT) on V board so that the green cathode voltage against ground becomes 160 V DC.
4. Similarly, adjust with RV1704 (B BKG) and RV1705 (R BKG) on V board so that the blue and red cathode voltages become 160 V DC.

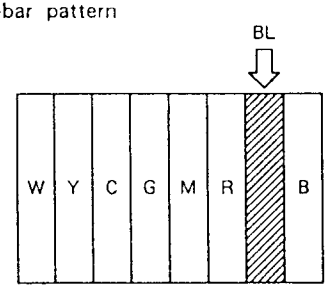


5. Observing the screen, adjust with RV709 (SCREEN) on C board so that the back-ground of the dot signal is bright dimly.

(White Balance)

1. Receive a color-bar pattern signal with the pattern generator, and to make black and white screen by chroma switch off.
2. • BRIGHTNESS ····· 50%
   • CONTRAST ····· Minimum
   • CHROMA ····· 50%
   • DRIVE volume
   (V BOARD) ····· mechanical center
   • BKG volume
   (V BOARD) ····· mechanical center
3. Adjust RV1710 (SUB BRIGHT) so that the blue stripe portion on the color-bar pattern signal is bright dimly.

color-bar pattern



4. Receive an entirely white signal from the pattern generator.
5. CONTRAST ····· 70%
6. Using the luminance level meter, adjust the luminance level of the pattern generator becomes 8 Nit. (The condition the screen is bright dimly.)
7. Adjust with the color analyzer the white balance.
8. Reset the luminance level of the pattern generator, and adjust the white balance. (High light condition.)

SECTION 4
SAFETY RELATED ADJUSTMENTS

CONFIRMATION WHEN REPLACING H.V.R (High Voltage Resistor)

The following adjustment should be confirm the output voltage when replacing HVR.

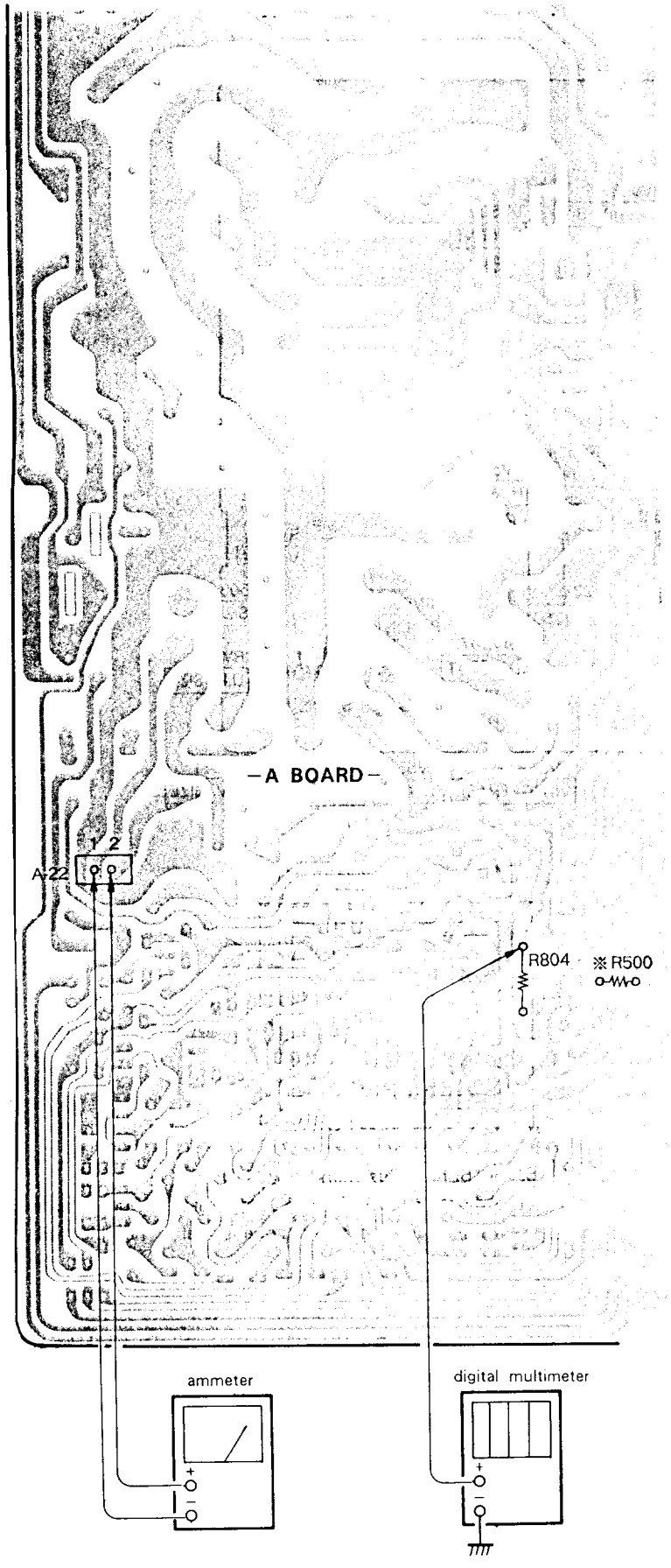
1. Receive an entire white signal.
2. • CONTRAST ····· Maximum
   • BRIGHTNESS ····· Maximum
3. Connect a digital multimeter to the A-20 connector side lead of R804.
4. Confirm the voltage is 14.1 ±1.0 V DC.

※R500, CONFIRMATION METHOD (HOLD-DOWN CONFIRMATION) AND READJUSTMENTS

The following adjustments should always be performed when replacing the following components.

IC501, Q503, Q504, Q505, Q506, D509, D510, C505, C520, C524, C525, C526, C527, C528, C529, C530, C531, R500, R506, R516, R517, R518, R519, R520, R521, R522, R523, R524, R525, R526, R528, R804, NL501, HVR } on A board

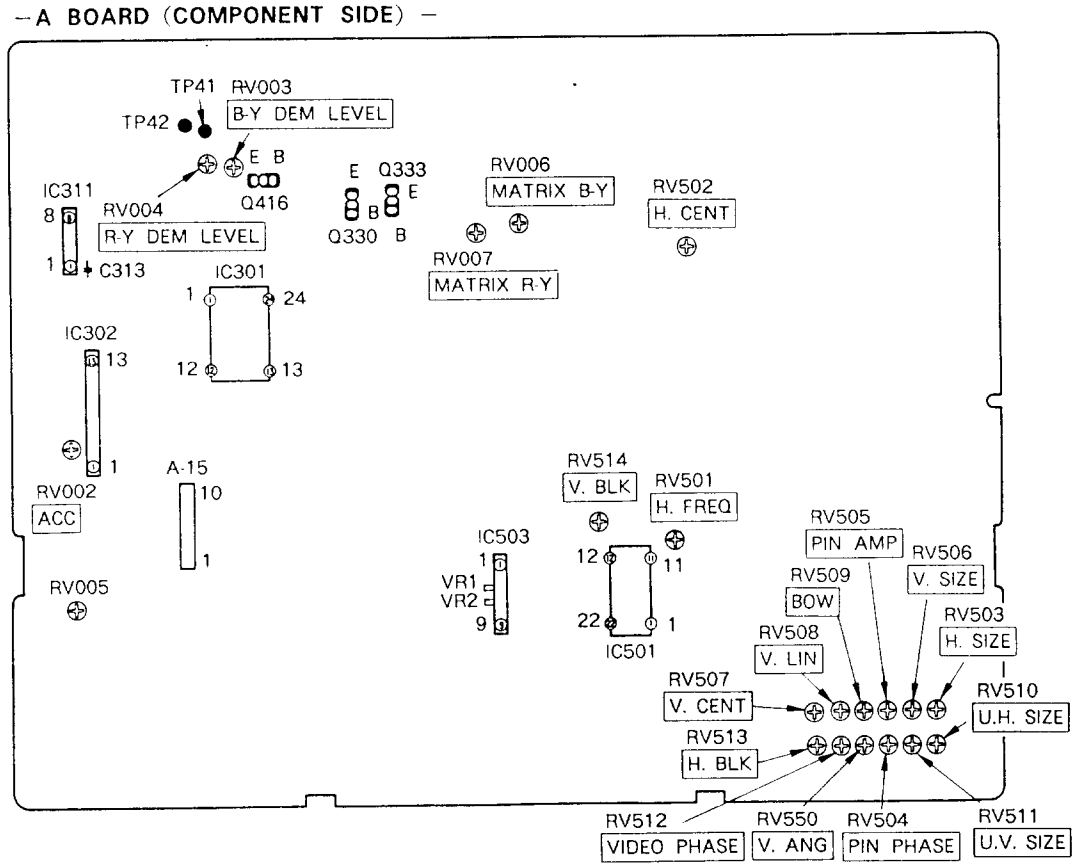
1. Receive an entire white signal.
2. • CONTRAST ····· Maximum
   • BRIGHTNESS ····· Maximum
3. Connect a digital multimeter to the A-20 connector side lead of R804.
4. Confirm the voltage is 14.1 ±1.0 V DC.
5. Receive a dot signal.
6. Disconnect A-22 connector (ABL JIG) on A board and connect an ammeter.
7. Adjust BRIGHTNESS and CONTRAST so that the current is 70 ±30 μA.
8. Apply an external DC voltage gradually to the A-20 connector side lead of R804, and when the voltage becomes 16.4 ±0.1 V DC, confirm the HOLD-DOWN circuit operates immediately and raster disappears.
9. With the same procedure of item 8, when the voltage becomes 15.8 ±0.1 V DC, confirm the HOLD-DOWN circuit doesn't operate.
10. Receive an entire white signal.
11. Adjust with BRIGHTNESS and CONTRAST volumes so that the current is 600 ±40 μA.
12. Apply DC voltage to the A-20 connector side lead of R804, and when the voltage becomes 15.8 ±0.1 V DC, confirm the HOLD-DOWN circuit operates immediately and raster disappears.
13. With the same procedure of item 8, when the voltage becomes 15.2 ±0.1 V DC, confirm the HOLD-DOWN circuit doesn't operate.
14. When step 4 to 13 is not satisfied, readjustment should be performed by altering the resistance value of R500 (※).


–A BOARD–
A-22
1
2
R804
※ R500
ammeter
digital multimeter

SECTION 5
CIRCUIT ADJUSTMENTS

5-1. A BOARD ADJUSTMENTS

– A BOARD (COMPONENT SIDE) –



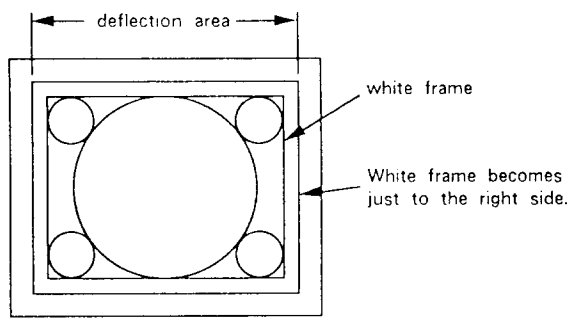
HORIZONTAL OSCILLATION FREQUENCY ADJUSTMENT (RV501)

1. Receive a monoscope signal.
2. Connect pin ① of IC501 to ground with 100 μF/16 V electrolytic capacitor.
3. Adjust RV501 so that the screen streaming stops.

f_0 : low f_0 : suitable f_0 : high

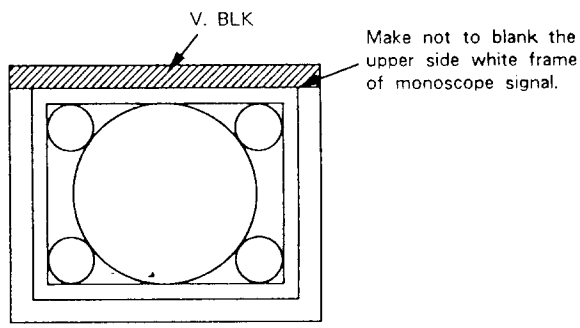
H-V BLK ADJUSTMENTS (RV510, RV512, RV513, RV514)

1. Receive a monoscope signal.
2. Set U/S (Under Scan) switch to Under mode.
3. • CONTRAST ····· Minimum
   • BRIGHTNESS ····· Maximum
4. Adjust RV510 (U. H. SIZE) so that the white frame of monoscope signal becomes visible.
5. Adjust RV512 (Video Phase) so that the white frame of monoscope signal becomes to the right side just on the screen.

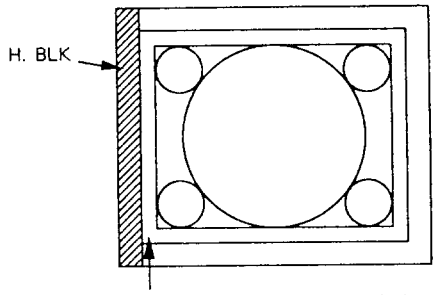


6. V. BLK Adjustment (RV514)

(1) Adjust RV514 (V. BLK) so that the upper side white frame of monoscope signal is not blanked.

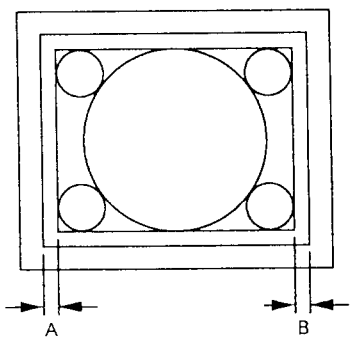


7. H. BLK Adjustment (RV513)
(1) Adjust with RV513 (H. BLK) so that the vertical line of the white frame of monoscope signal is blanked as following figure.



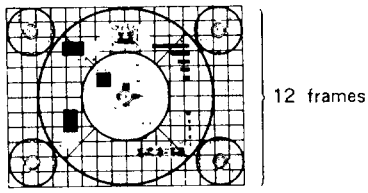
Make to blank the vertical line of the white frame of monoscope signal.

8. Screen Phase Adjustment (RV512)
(1) Adjust RV512 (Video Phase) so as to equalize the width of the white frame of monoscope signal on both sides of screen right and left.

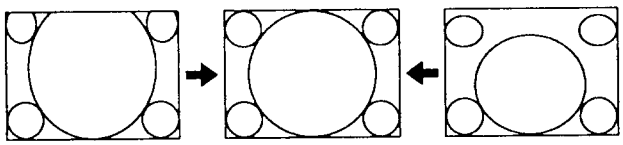


VERTICAL DEFLECTION PART ADJUSTMENTS (RV506, RV507, RV508, RV511)

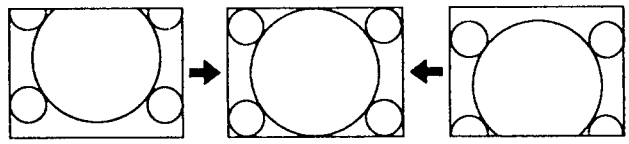
1. Receive a monoscope signal.
2. • CONTRAST ····· 70%
   • BRIGHTNESS ····· 50%
3. Adjust RV506 (V. SIZE) so that the vertical size of monoscope signal becomes 12 frames.



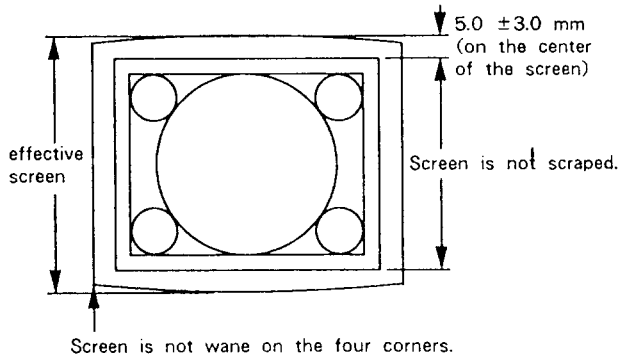
4. Adjust RV508 (V. LIN) the vertical linearity.



5. Adjust RV507 (V. CENT) the vertical position.

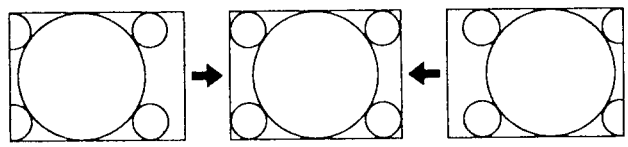


6. Adjust RV506 (V. SIZE) so that the vertical size of monoscope signal becomes 11.75 ±0.2 frames.
7. Set U/S (Under Scan) switch to Under mode.
8. Adjust with RV511 (U.V. SIZE) as follows.

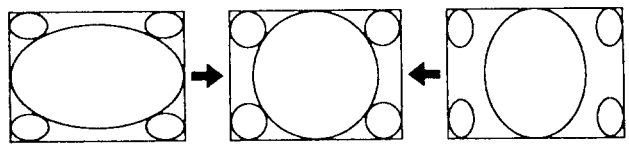


HORIZONTAL DEFLECTION PART ADJUSTMENTS (RV502, RV503, RV504, RV505, RV509, RV510, RV550)

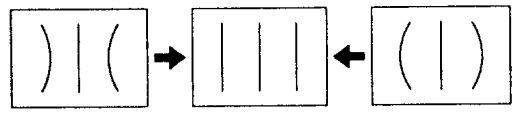
1. Receive a monoscope signal.
2. • CONTRAST ····· 70%
   • BRIGHTNESS ····· 50%
3. H. CENT Adjustment (RV502)
(1) Adjust RV502 (H. CENT) the horizontal position.



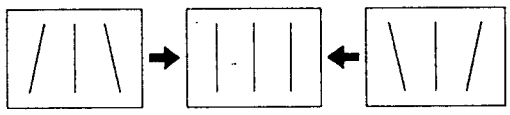
4. H. SIZE Adjustment (RV503)
(1) Adjust RV503 (H. SIZE) the horizontal size.



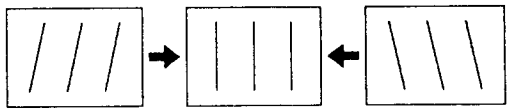
5. PIN AMP, PIN PHASE, V. ANG, BOW Adjustments (RV505, RV504, RV509, RV550)
   • PIN AMP (RV505)



• PIN PHASE (RV504)

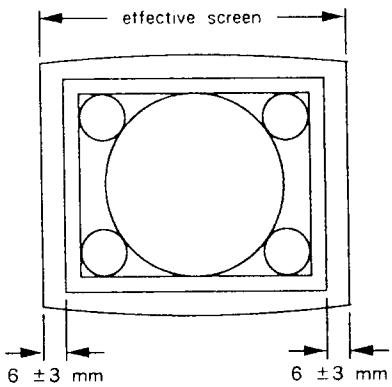


• V. ANG (RV550)



• BOW (RV509)

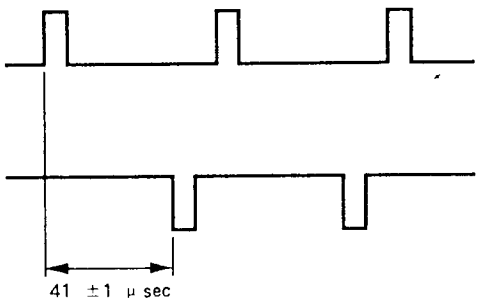
6. Adjust RV503 (H. SIZE) so that the horizontal size becomes 15.75 ±0.2 frames.
7. Set U/S (Under Scan) switch to Under mode.
8. Adjust RV510 (U.H. SIZE) the Under H. SIZE as follows.



H-V DELAY ADJUSTMENT (VR1, VR2)

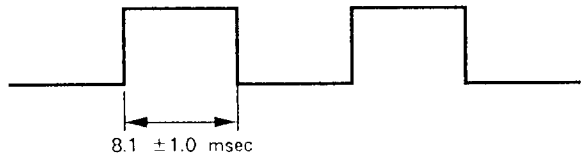
1. Receive a monoscope signal.
2. • CONTRAST ····· 70%
   • BRIGHTNESS ····· 50%
3. Set H-V DELAY switch to DELAY mode.
4. H. DELAY Adjustment (VR1)

(1) Connect an oscilloscope to pin ② (SYNC SEP) and pin ⑨ (H. SYNC) of IC503.
(2) Adjust VR1 of IC503 to become 41 ±1 µsec as follows.



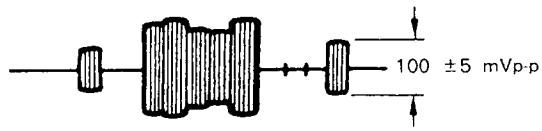
5. V. DELAY Adjustment (VR2)

(1) Connect an oscilloscope to pin ⑥ of IC503.
(2) Adjust VR2 of IC503 to become 8.1 ±1.0 msec as follows.



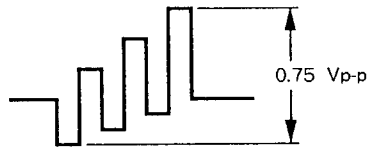
ACC ADJUSTMENT (RV002)

1. Receive a color-bar signal (EIA color-bar).
2. Connect an oscilloscope to the IC302 side lead of C313.
3. Adjust RV002 so that the burst signal level becomes 100 ±5 mVp-p.



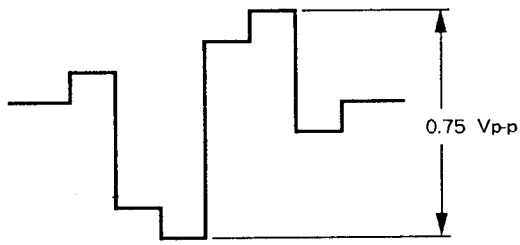
B-Y DEM LEVEL ADJUSTMENT (RV003)

1. Receive a color-bar signal (EIA 75% chroma color-bar).
2. Connect an oscilloscope to TP42 (B-Y).
3. Adjust RV003 so that the B-Y waveform becomes 0.75 Vp-p.



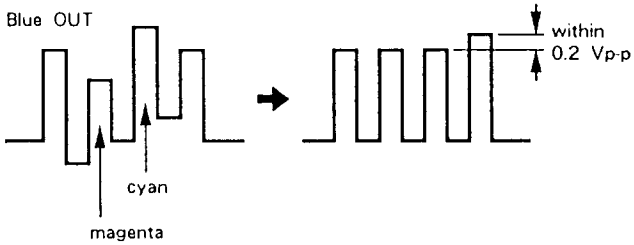
R-Y DEM LEVEL ADJUSTMENT (RV004)

1. Receive a color-bar signal (EIA 75% chroma color-bar).
2. Connect an oscilloscope to TP41 (R-Y).
3. Adjust RV004 so that the R-Y waveform becomes 0.75 Vp-p.

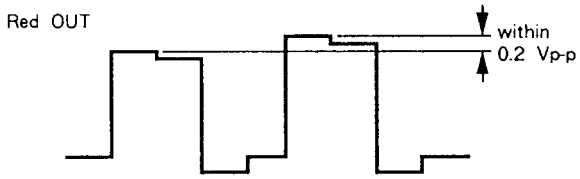


MATRIX ADJUSTMENT (RV006, RV007)

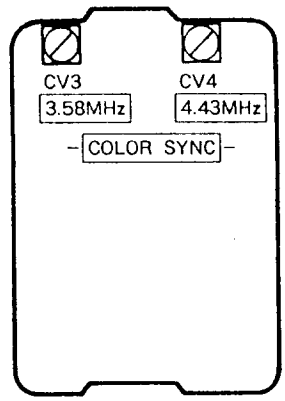
1. Receive a color-bar signal.
   (white peak : 75%
   black level : 0%
   chroma max. : 75%
   chroma min. : 0%)
2. CONTRAST ····· 70%
3. Connect an oscilloscope to pin ⑤ (B OUT) of A-15.
4. Adjust RV006 (B-Y) so that the BLUE OUT waveform becomes flat as following figure.



5. When there is difference between cyan portion and magenta portion, adjust with RV006 while tracking with PHASE volume for user control.
6. Connect an oscilloscope to pin ③ (R-Y) of A-15.
7. Adjust RV007 (R-Y) so that the RED OUT waveform becomes flat as following figure.



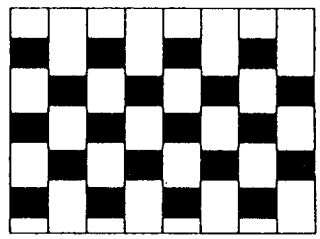
5-2. XA BOARD ADJUSTMENT



COLOR SYNCHRONIZATION (CW) ADJUSTMENT (CV3, CV4)

1. Short-circuit pins ⑨ and ⑩ of IC301 on A board.
2. Connect pin ③ of IC311 on A board to +12 V line via 4.7 kΩ resistor.
3. Short-circuit base and emitter of Q416 on A board.
4. 3.58 MHz Adjustment (CV3)

(1) Receive a color-bar signal (EIA color-bar).
(2) Adjust CV3 the color synchronization.



Adjust so that color stripes disappear and the hue change is stabilized extremery.

5. 4.43 MHz Adjustment (CV4)

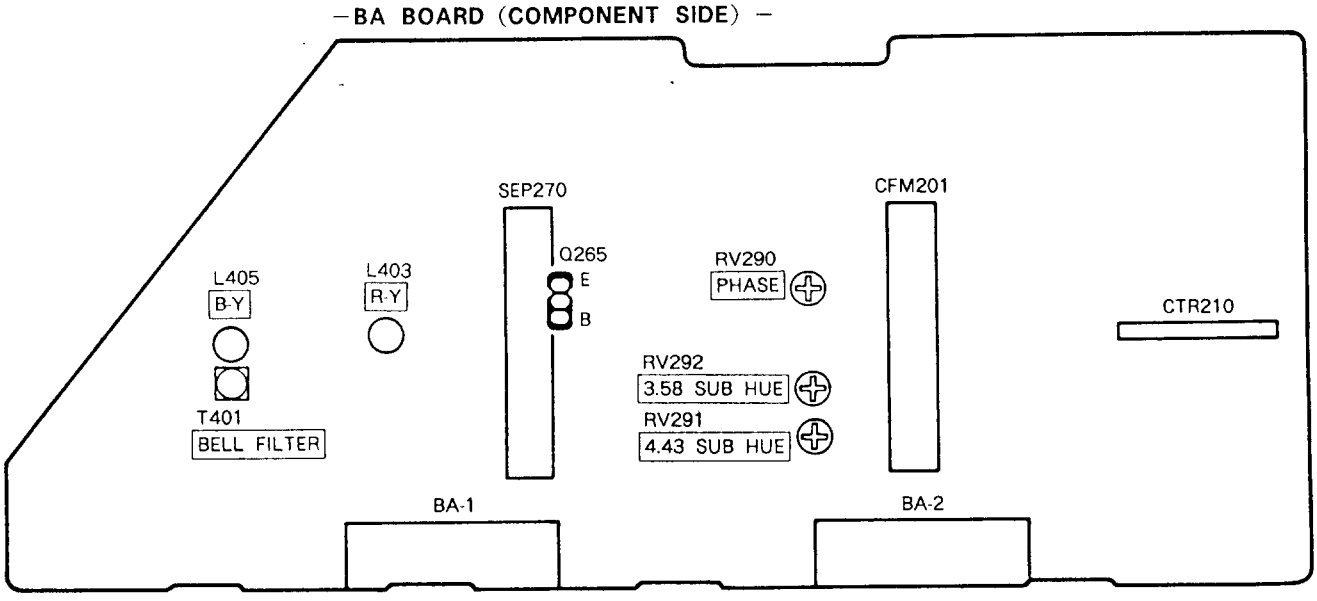
(1) Receive a color-bar signal (EBU color-bar).
(2) Adjust CV4 the color synchronization.

6. Remove the short-circuit positions pins ⑨ and ⑩ of IC301 and base and emitter of Q416.

CAUTION : This adjustment (XA board adjustment) should be made earlier than all adjustments of color.

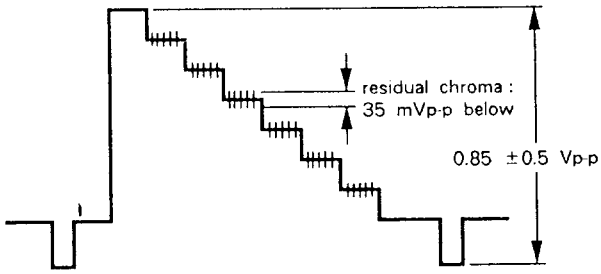
5-3. BA BOARD ADJUSTMENTS

– BA BOARD (COMPONENT SIDE) –

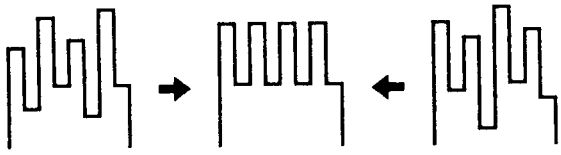


NTSC 3.58 MHz ADJUSTMENT (RV292)

1. Receive NTSC 3.58 color-bar signal.
2. Connect an oscilloscope to pin ⑮ (COMPOSITE IN) of BA-2 connector.
3. Confirm the Y-OUT is 0.87 ±0.5 Vp-p.
4. Confirm the residual chroma is 35 mVp-p below. When it is above 35 mVp-p, adjust with RV1 and T1 inside CFM201 while tracking.



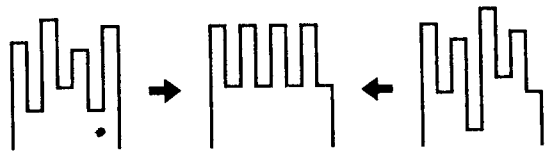
5. Connect an oscilloscope to pin ⑤ (B-OUT) of A-15 connector.
6. Adjust RV292 (3.58 SUB HUE) so that the BLUE OUT waveform level becomes flat as following figure.



Note : CONTRAST·····normal condition
HUE·····Normal condition

NTSC 4.43 MHz ADJUSTMENT (RV291)

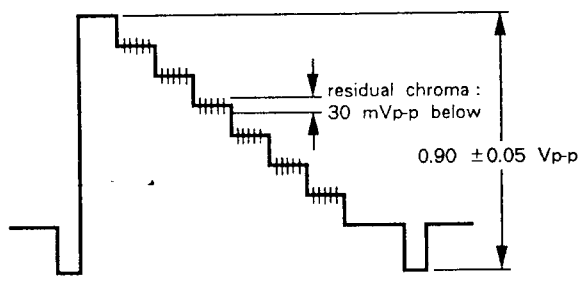
1. Receive NTSC 4.43 color-bar signal.
2. Confirm the voltage on pin ④ of CTR210 is above 5.0 V DC, and on pin ⑤ of CTR210 is below 0.1 V DC.
3. Connect an oscilloscope to pin ⑤ of A-15 connector.
4. Adjust RV291 (4.43 SUB HUE) so that the BLUE OUT waveform level becomes flat as following figure.



Note : CONTRAST·····Normal condition
HUE·····Normal condition

PAL ADJUSTMENTS (RV290)

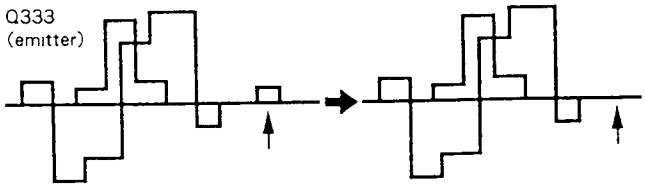
1. Receive NTSC 4.43 color-bar signal.
2. Confirm the voltage on pin ④ of CTR210 is above 5.0 V DC, and on pin ⑤ of CTR210 is below 1.0 V DC.
3. Connect an oscilloscope to pin ⑪ of BA-2 connector.
4. Confirm the Y-OUT is 0.90 ±0.05 Vp-p and the residual chroma is below 30 mVp-p.



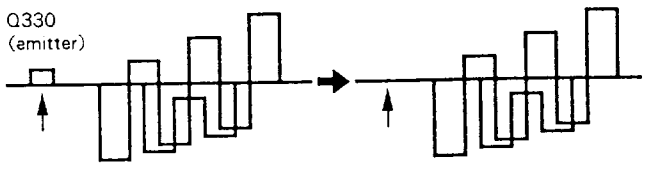
5. ANTI-PAL Adjustment (RV290)

(1) Receive the special PAL color-bar.

(2) Connect an oscilloscope to emitter of Q333 on A board, and adjust RV290 (PHASE) so that R-Y anti-PAL portion becomes flat as following figure.



(3) Connect an oscilloscope to emitter of Q330 on A board, and adjust RV2 inside SEP270 so that B-Y anti-PAL portion becomes flat as following figure.

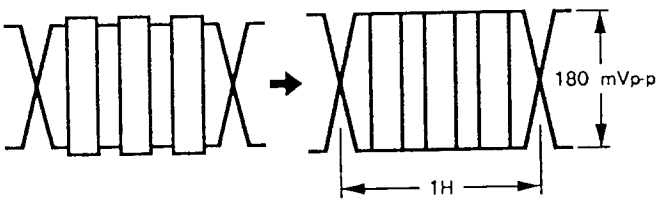


SECAM ADJUSTMENTS (T401, L403, L405)

1. Receive SECAM color-bar.
2. Bell Filter Adjustment (T401)

(1) Connect an oscilloscope to emitter of Q265.

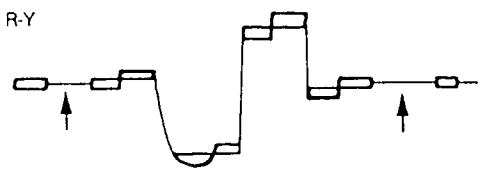
(2) Adjust T401 (Bell Filter) so that the chroma waveform becomes smooth.



3. Color Balance Adjustment (L403)

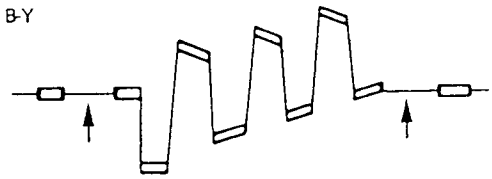
(1) Connect an oscilloscope to pin ⑦ (R-Y) of BA-1 connector.

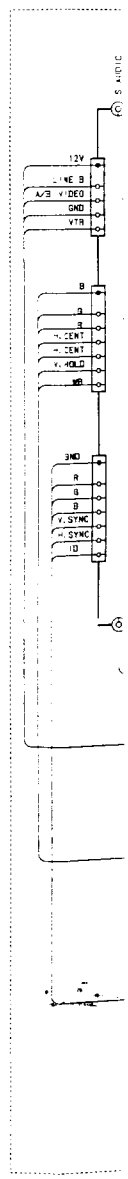
(2) Adjust L403 (R-Y) so that the non-colored portion level becomes flat.



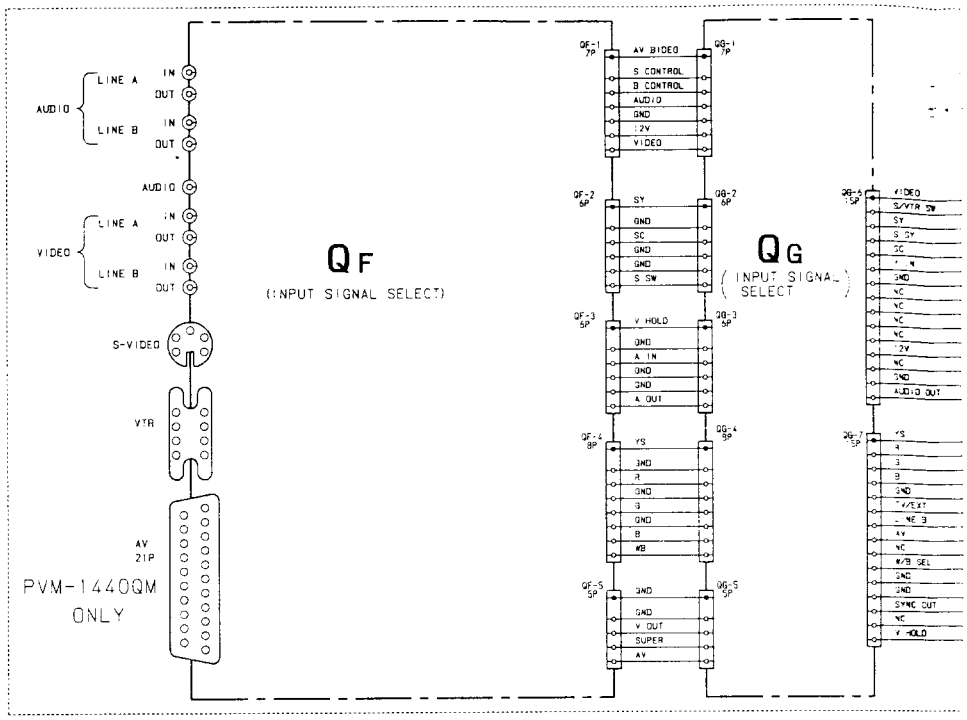
(3) Connect an oscilloscope to pin ⑧ (B-Y) of BA-1 connector.

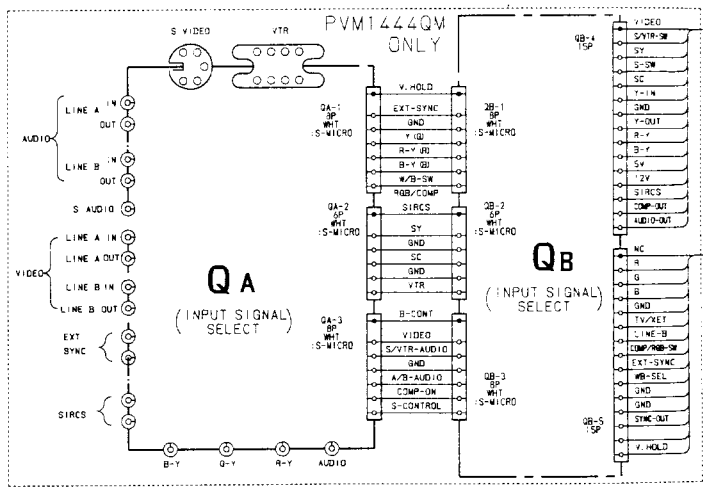
(4) Adjust L405 (B-Y) so that the non-colored portion level becomes flat.

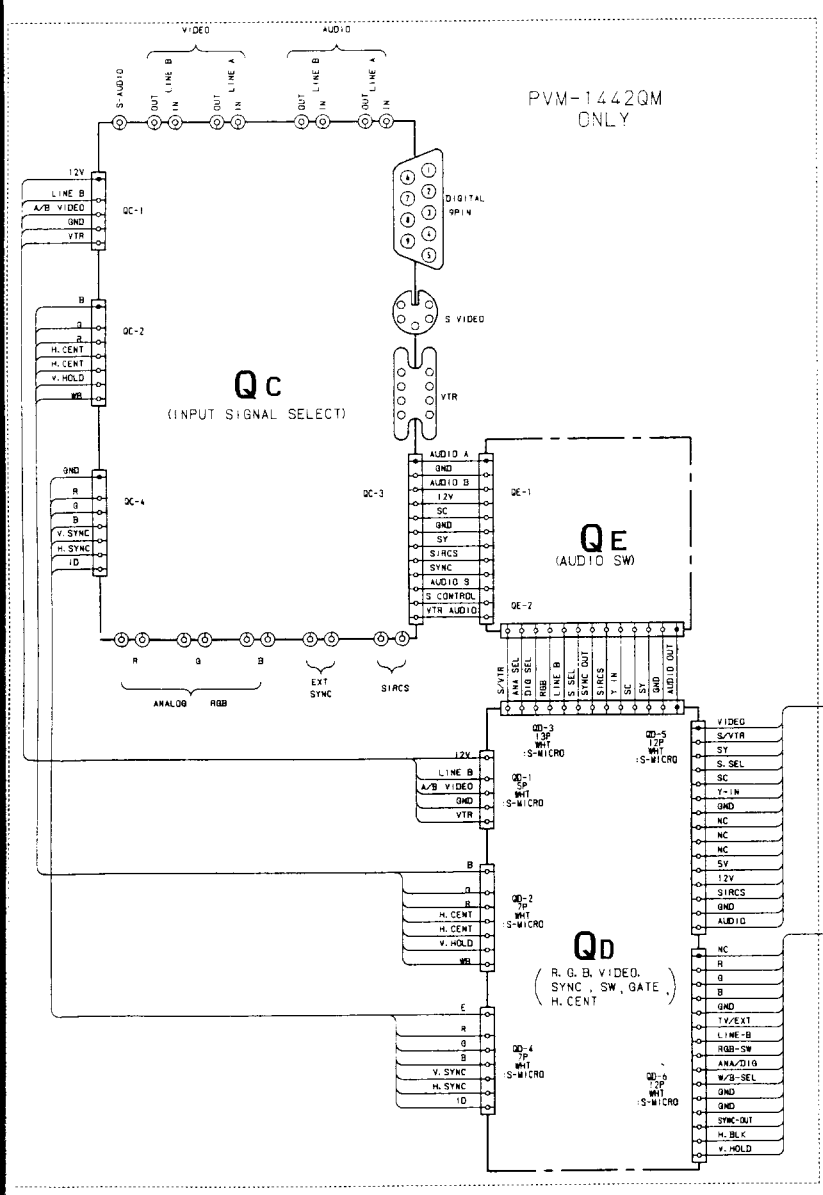


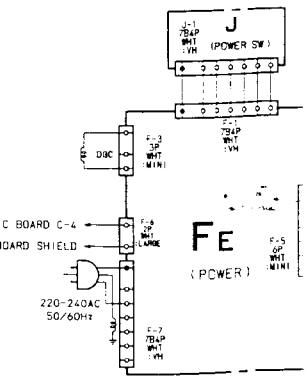

12V
GND
VTR
B
GND
R
G
B
V.SYNC
ID

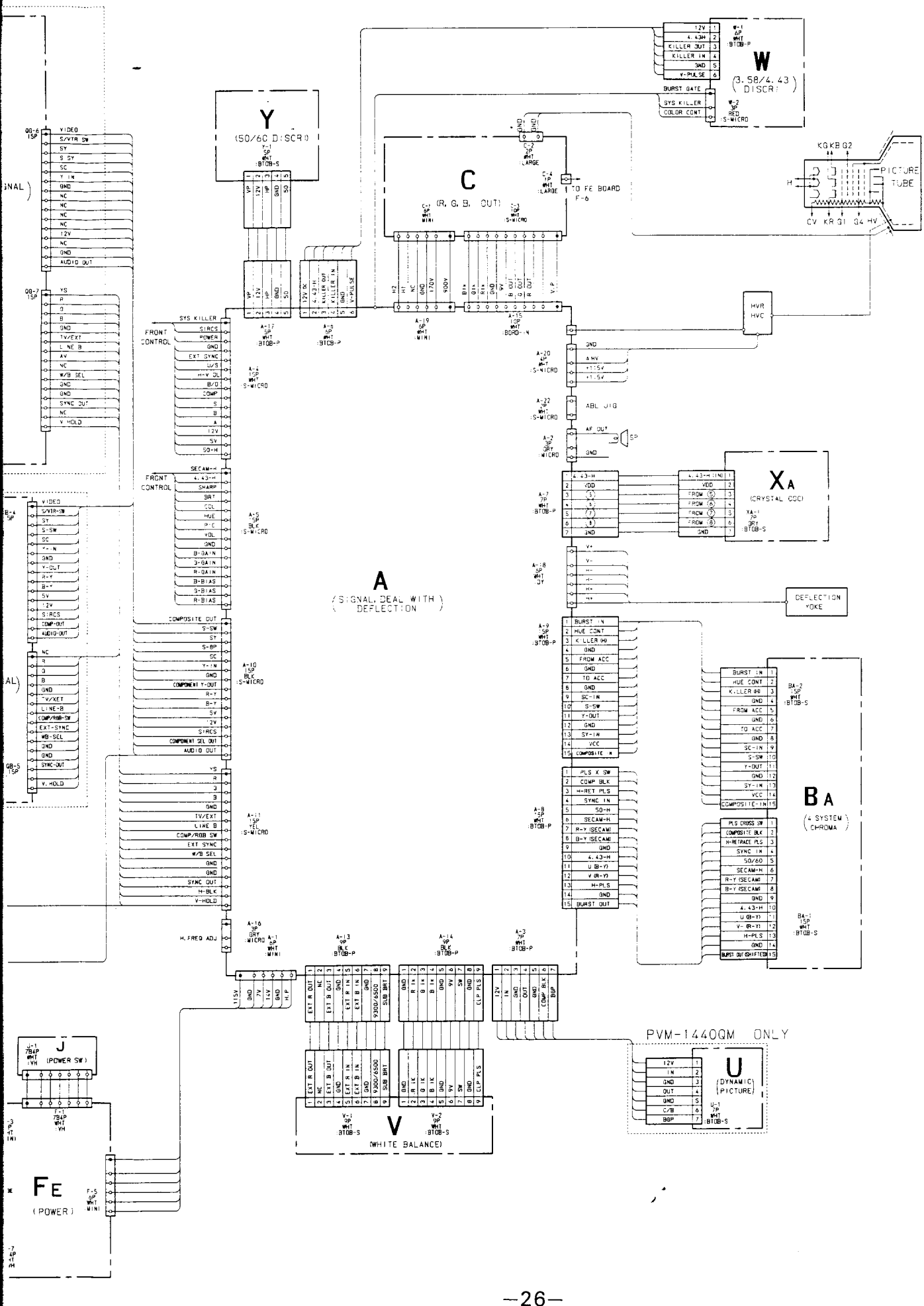
6-1. FRAME SCHEMATIC DIAGRAM



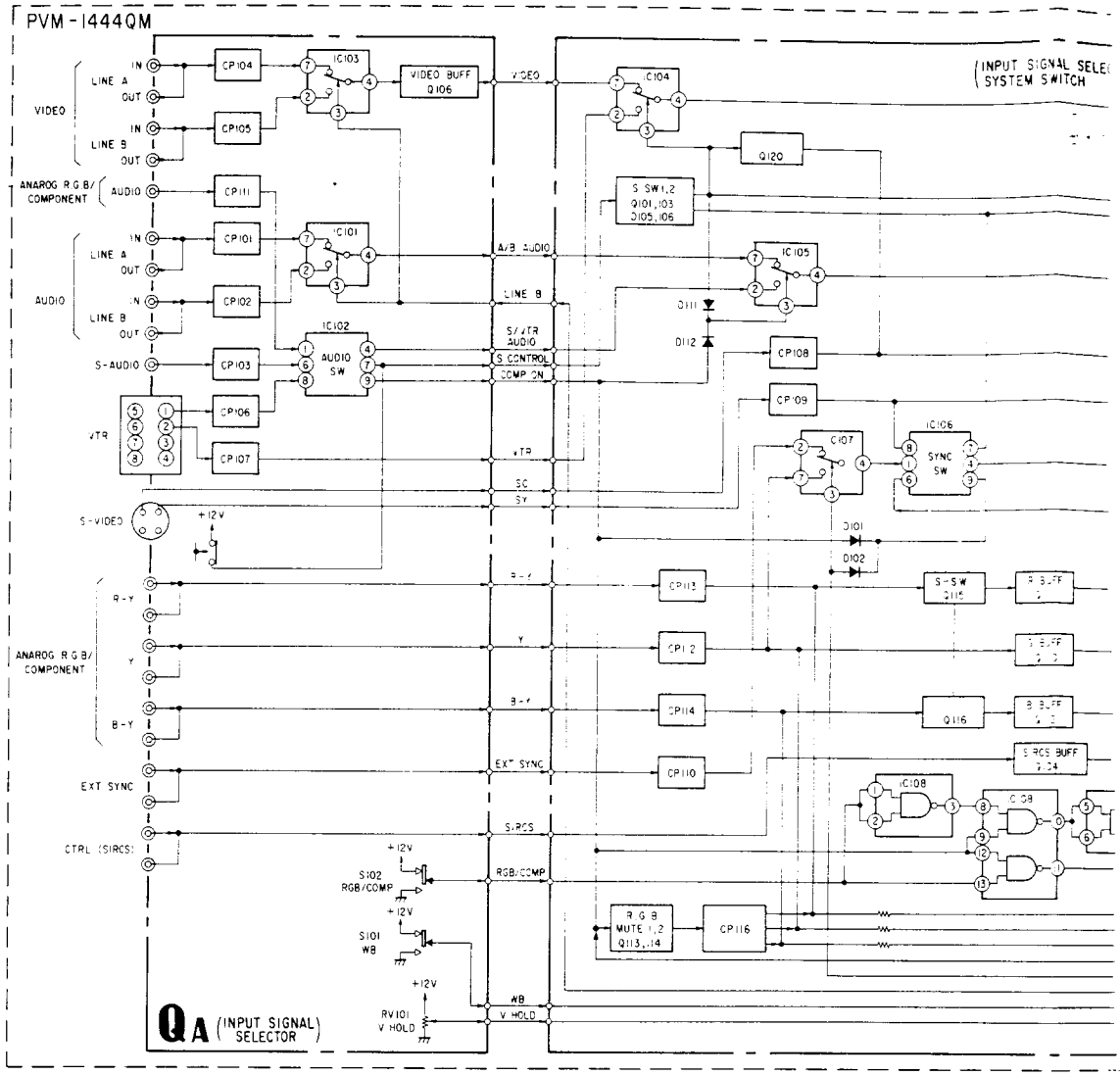


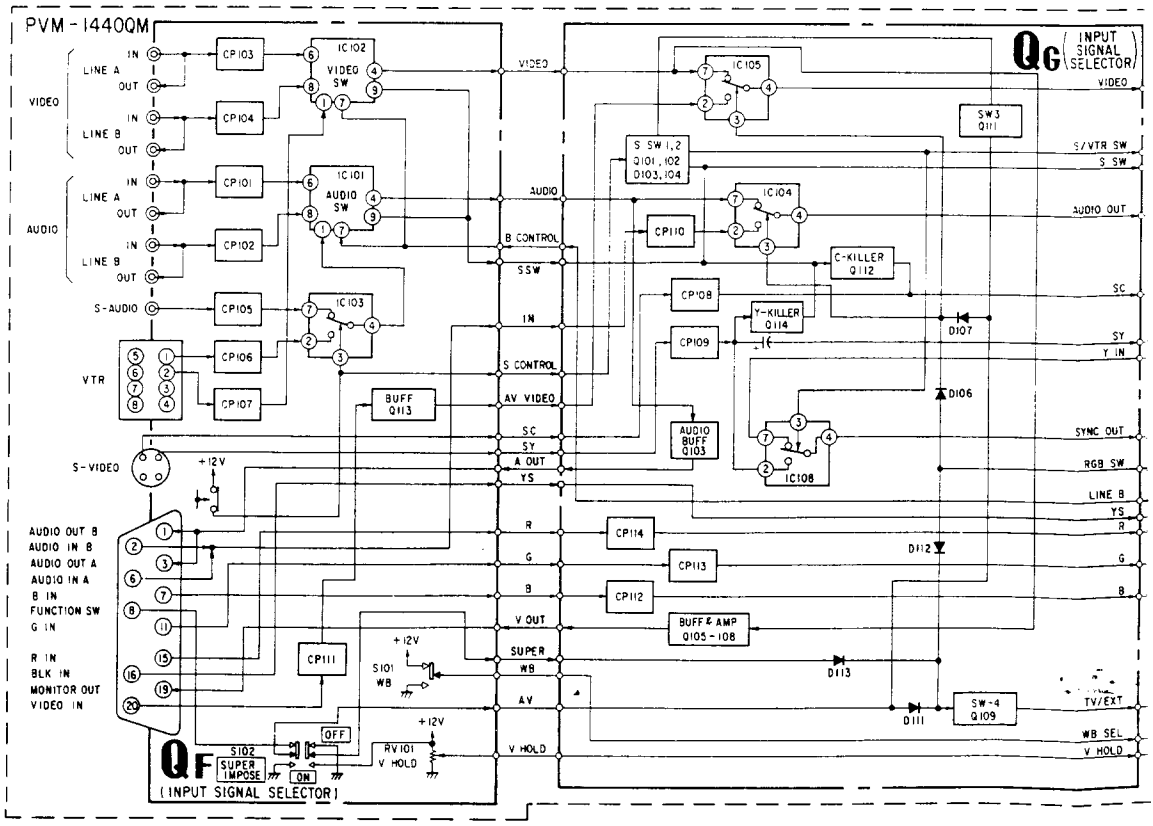


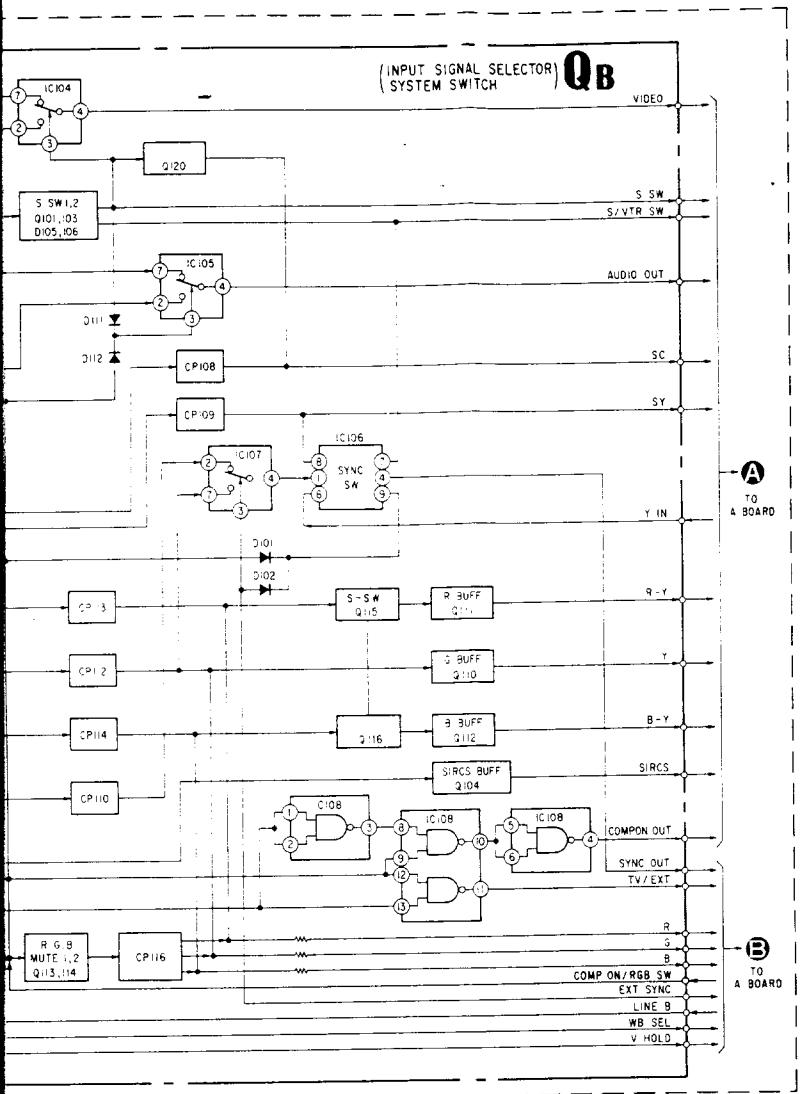


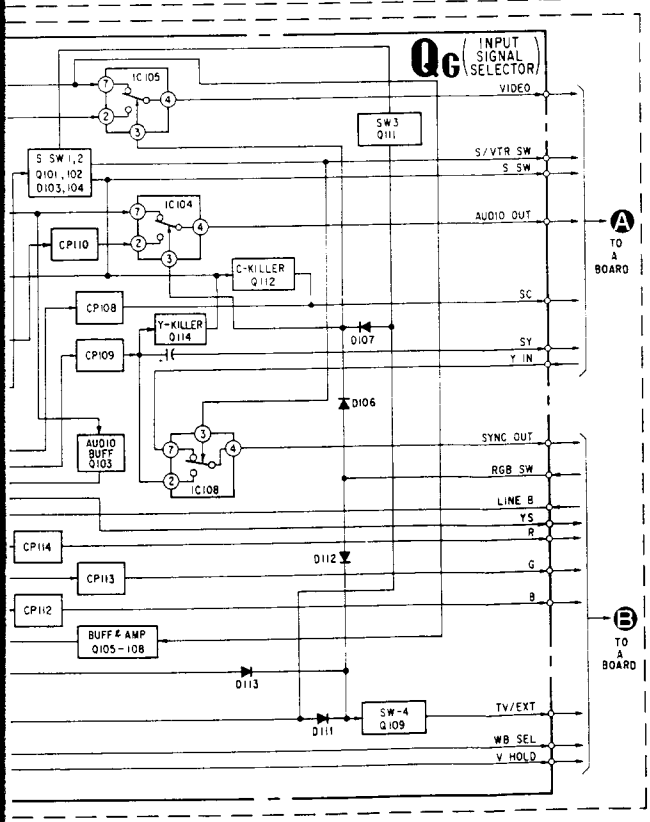

Y
(50/60 DISCRI)
C
(R, G, B, OUT)
W
(3.58/4.43 DISCRI)
A
(SIGNAL, DEAL WITH DEFLECTION)
XA
(CRYSTAL OSC)
BA
(4 SYSTEM CHROMA)
V
(WHITE BALANCE)
U
(DYNAMIC PICTURE)
J
(POWER SW)
FE
(POWER)
PICTURE TUBE
DEFLECTION YOKE
PVM-1440QM ONLY

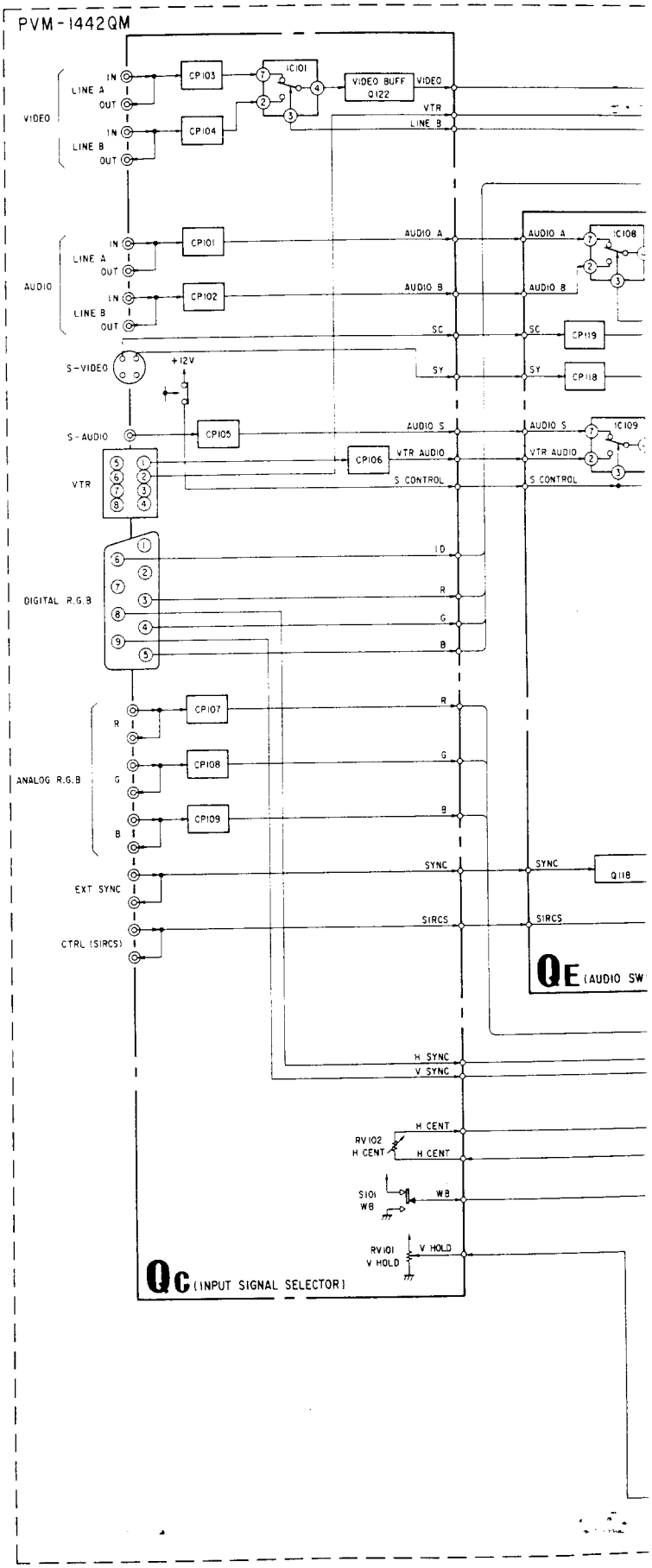
6-2. BLOCK DIAGRAMS

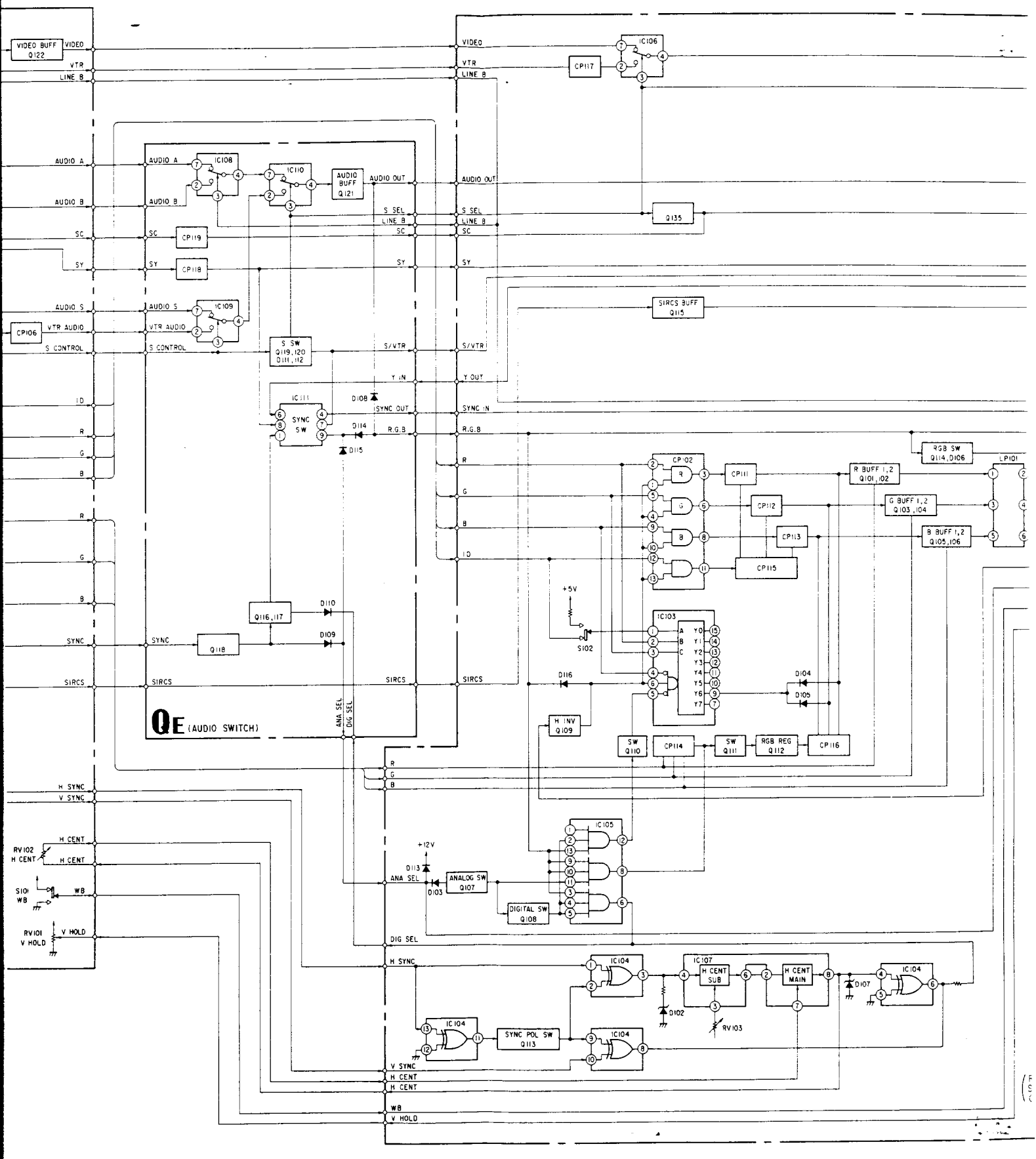


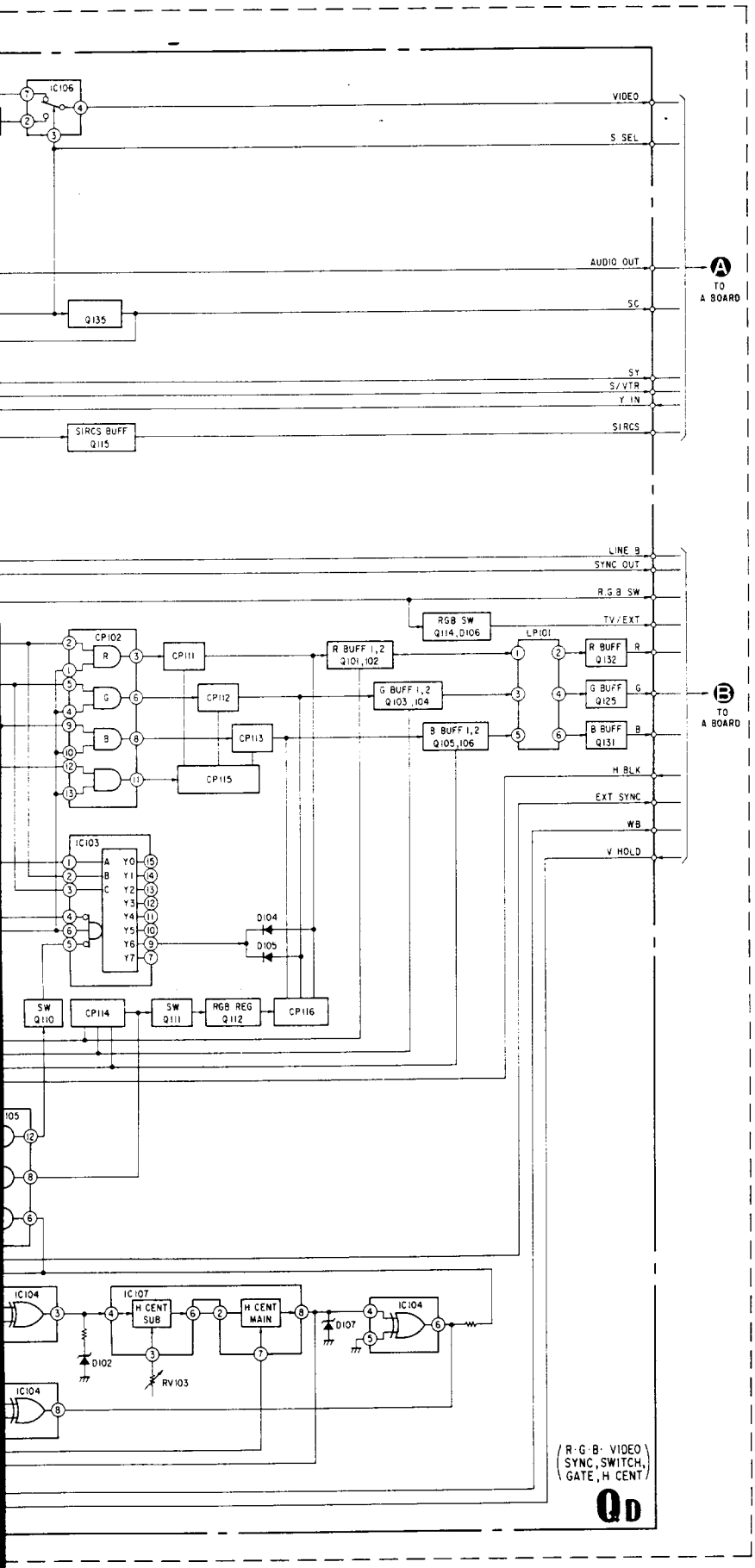


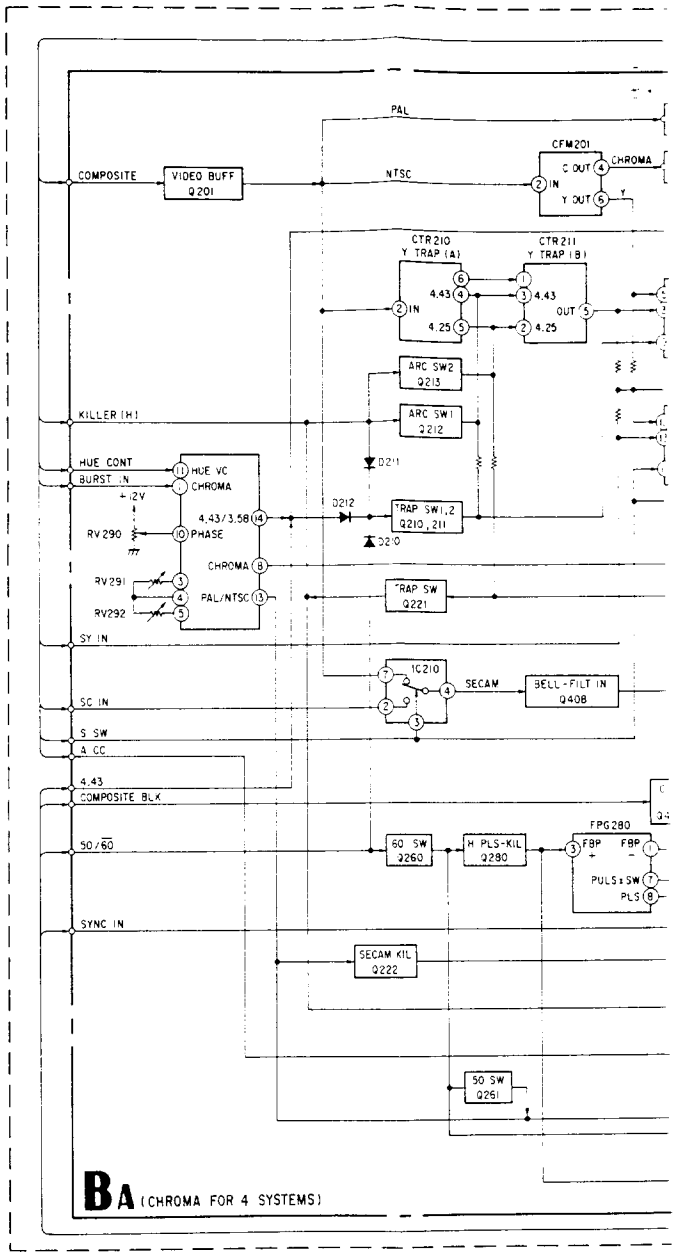

(INPUT SIGNAL SELECTOR)
SYSTEM SWITCH
QB
VIDEO
S SW
S/VTR SW
AUDIO OUT
SC
SY
Y IN
R-Y
Y
B-Y
SIRCS
COMPON OUT
SYNC OUT
TV/EXT
R
G
B
COMP ON/RGB SW
EXT SYNC
LINE B
WB SEL
V HOLD
TO A BOARD

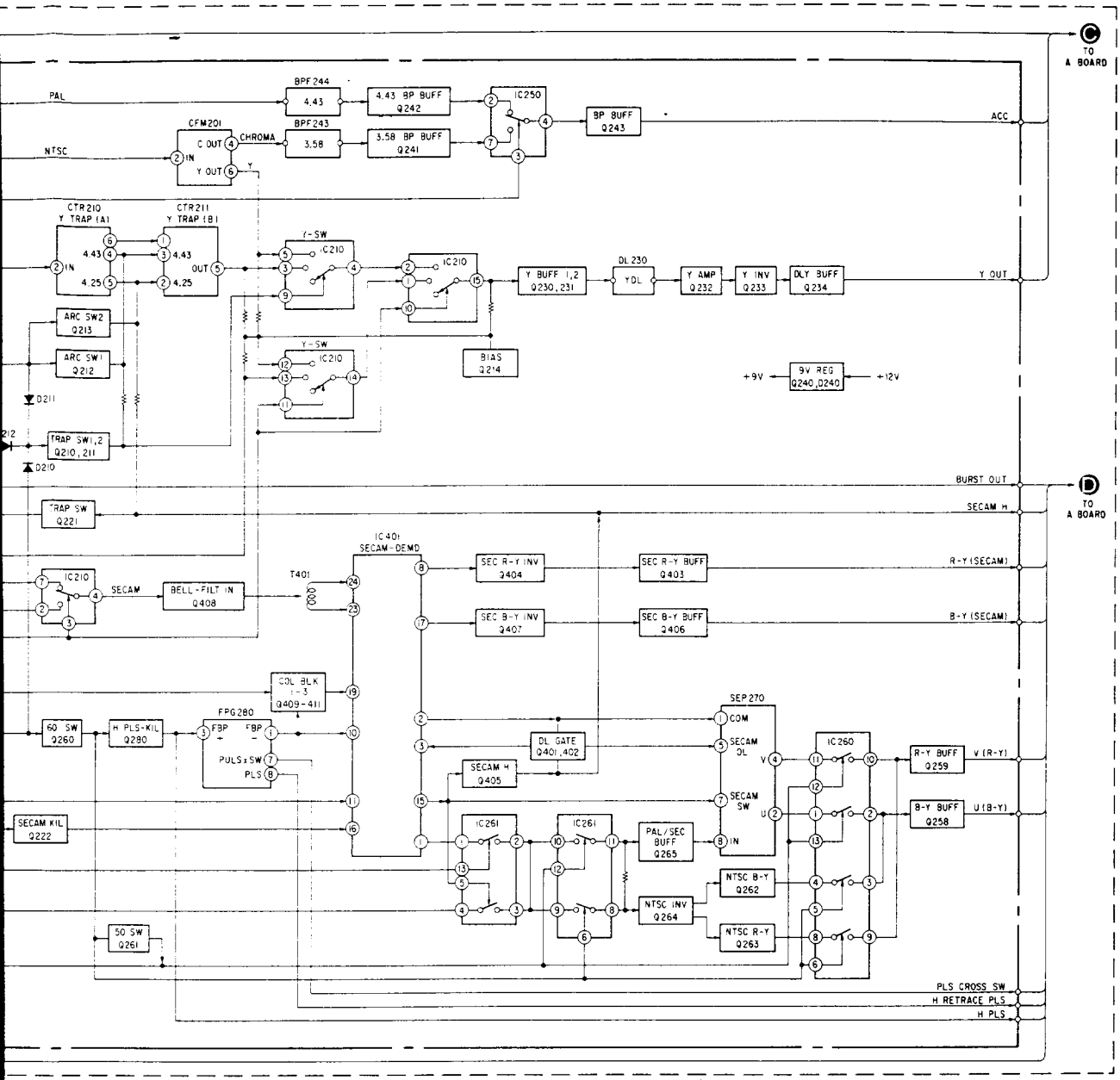

QG (INPUT SIGNAL SELECTOR)
VIDEO
S/VTR SW
S SW
AUDIO OUT
SC
SY
Y IN
SYNC OUT
RGB SW
LINE B
YS
R
G
B
TV/EXT
WB SEL
V HOLD
TO A BOARD

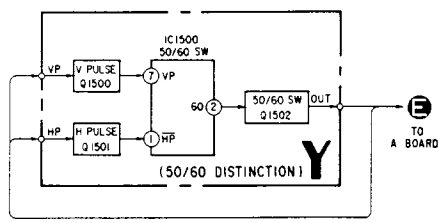

PVM-1442QM
VIDEO
AUDIO
S-VIDEO
S-AUDIO
VTR
DIGITAL R.G.B
ANALOG R.G.B
EXT SYNC
CTRL (SIRCS)
+12V
VIDEO BUFF Q122
AUDIO A
AUDIO B
AUDIO S
VTR AUDIO
S CONTROL
ID
R
G
B
SYNC
SIRCS
H SYNC
V SYNC
H CENT
WB
V HOLD
QE (AUDIO SW
QC (INPUT SIGNAL SELECTOR)


QE (AUDIO SWITCH)
VIDEO BUFF Q122
VIDEO
VTR
LINE B
AUDIO A
AUDIO B
SC
SY
AUDIO S
VTR AUDIO
S CONTROL
ID
R
G
B
SYNC
SIRCS
IC108
IC110
IC109
IC111
IC106
CP117
AUDIO BUFF Q121
AUDIO OUT
S SEL
CP119
CP118
S SW Q119,120 Q111,112
S/VTR
Y IN
Y OUT
SYNC SW
SYNC OUT
SYNC IN
D108
D114
D115
R.G.B
Q135
SIRCS BUFF Q115
CP102
CP111
CP112
CP113
CP115
R BUFF 1,2 Q101,102
G BUFF 1,2 Q103,104
B BUFF 1,2 Q105,106
RGB SW Q114,D106
LP101
+5V
S102
IC103
D116
D104
D105
H INV Q109
SW Q110
CP114
SW Q111
RGB REG Q112
CP116
Q116,117
D110
D109
Q118
ANA SEL
DIG SEL
H SYNC
V SYNC
H CENT
RV102 H CENT
S101 WB
RV101 V HOLD
WB
V HOLD
+12V
D113
D103
ANALOG SW Q107
DIGITAL SW Q108
IC105
IC104
IC107
H CENT SUB
H CENT MAIN
D102
RV103
D107
SYNC POL SW Q113

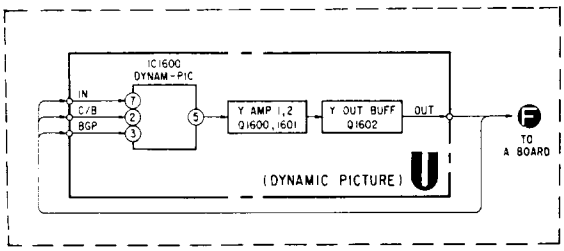

IC106
VIDEO
S SEL
AUDIO OUT
SC
Q135
SY
S/VTR
Y IN
SIRCS
SIRCS BUFF Q115
TO A BOARD
LINE B
SYNC OUT
R.G.B SW
TV/EXT
RGB SW Q114, D106
LP101
CP102
CP111
CP112
CP113
CP115
R BUFF 1,2 Q101,102
G BUFF 1,2 Q103,104
B BUFF 1,2 Q105,106
R BUFF Q132
G BUFF Q125
B BUFF Q131
TO A BOARD
H BLK
EXT SYNC
WB
V HOLD
IC103
D104
D105
SW Q110
CP114
SW Q111
RGB REG Q112
CP116
IC104
IC107
H CENT SUB
H CENT MAIN
D107
D102
RV103
(R·G·B· VIDEO SYNC, SWITCH, GATE, H CENT)
QD

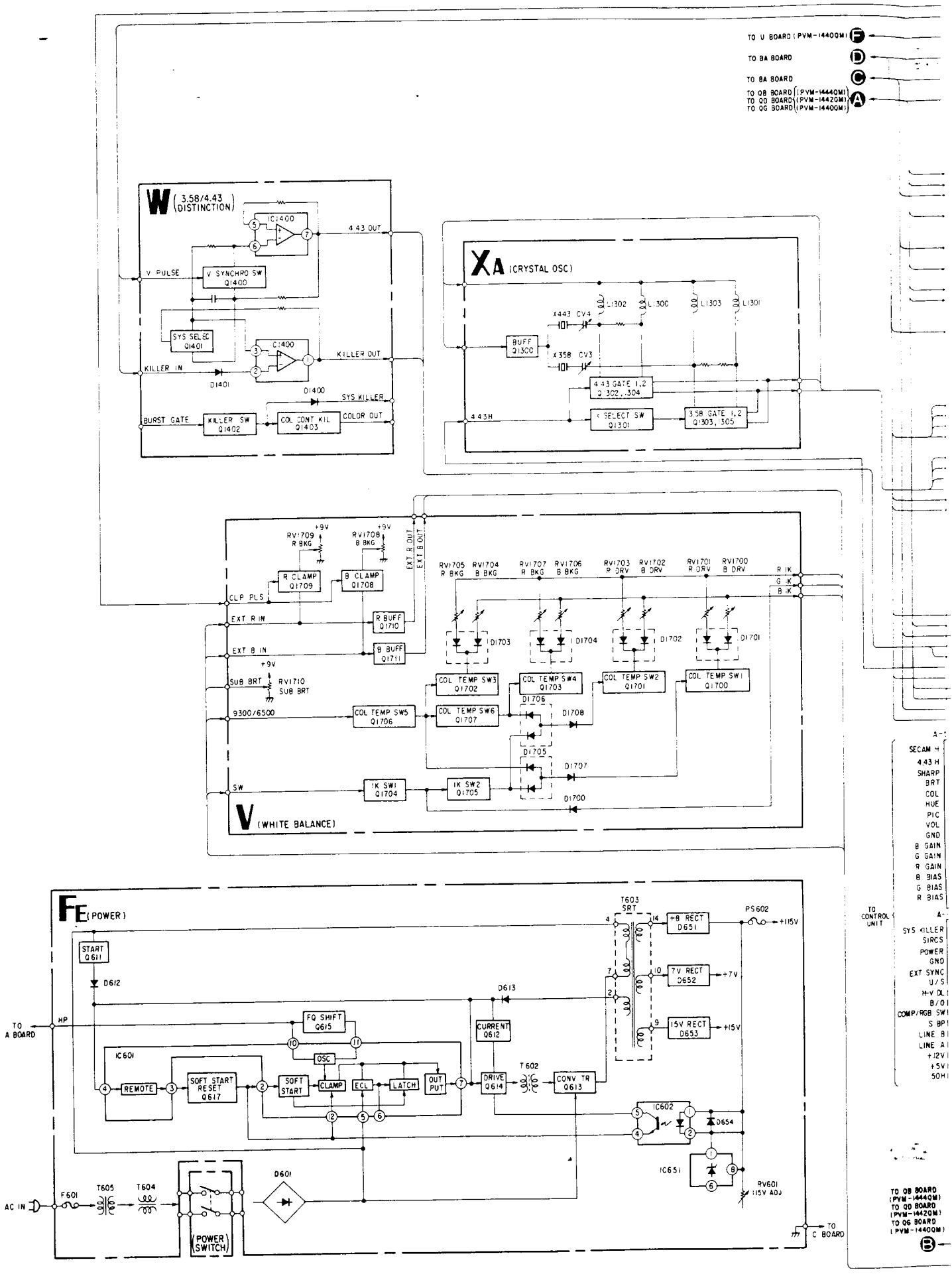

PAL
COMPOSITE
VIDEO BUFF Q201
NTSC
CFM201
C OUT
CHROMA
IN
Y OUT
CTR210 Y TRAP (A)
CTR211 Y TRAP (B)
4.43
4.25
OUT
ARC SW2 Q213
ARC SW1 Q212
KILLER (H)
D211
HUE CONT
BURST IN
HUE VC
CHROMA
+12V
4.43/3.58
D212
TRAP SW1,2 Q210, 211
RV290
PHASE
CHROMA
RV291
PAL/NTSC
D210
TRAP SW Q221
RV292
SY IN
IC210
SECAM
BELL-FILT IN Q408
SC IN
S SW
A.CC
4.43
COMPOSITE BLK
50/60
60 SW Q260
H PLS-KIL Q280
FPG280
FBP
PULS x SW
PLS
SYNC IN
SECAM KIL Q222
50 SW Q261
BA (CHROMA FOR 4 SYSTEMS)

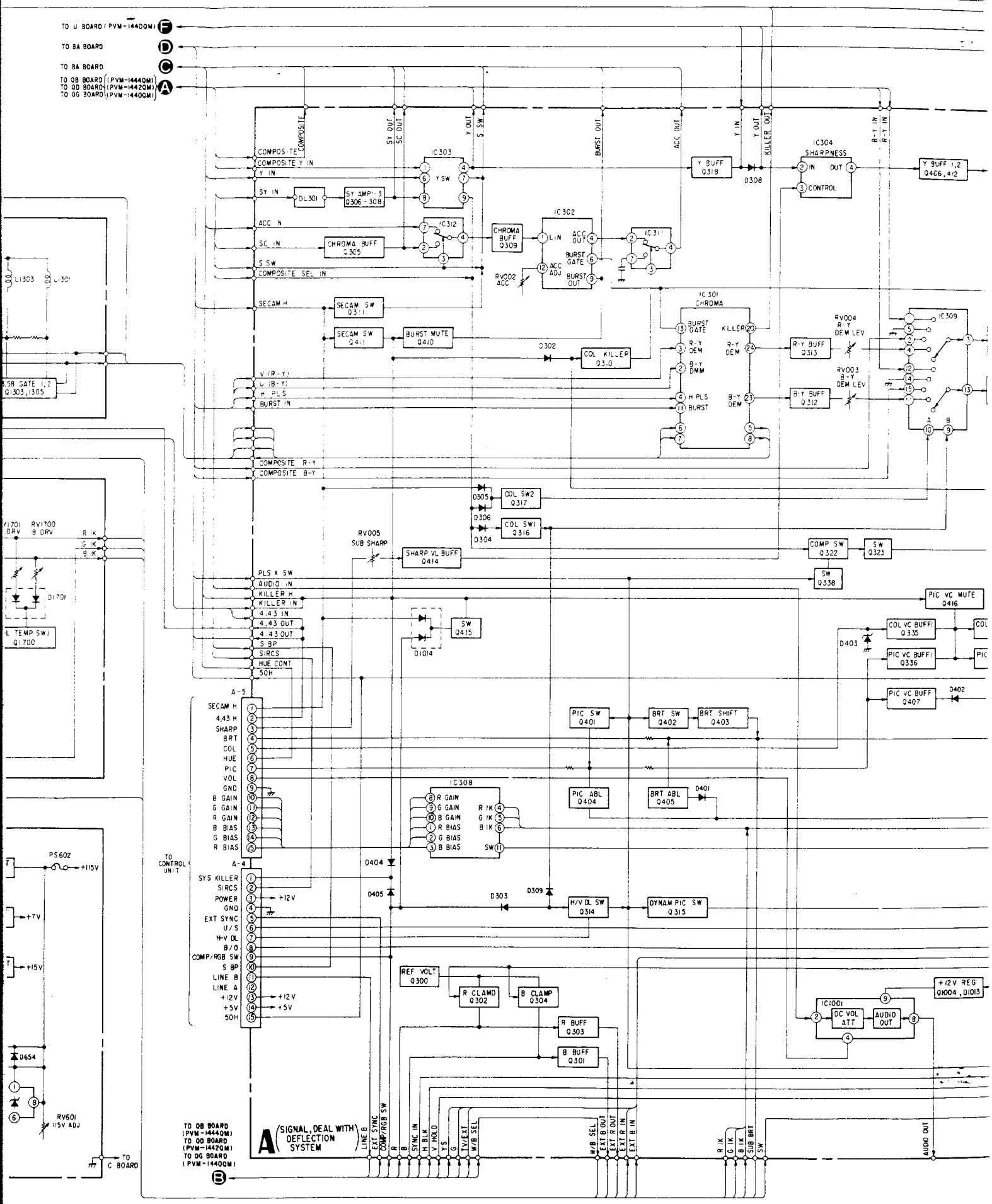

TO A BOARD
PAL
NTSC
BPF244
4.43
4.43 BP BUFF Q242
BPF243
3.58
3.58 BP BUFF Q241
CHROMA
CFM201
C OUT
Y OUT
IN
IC250
BP BUFF Q243
ACC
CTR210 Y TRAP (A)
CTR211 Y TRAP (B)
4.43
4.25
OUT
Y-SW
IC210
Y BUFF 1,2 Q230,231
DL 230
YDL
Y AMP Q232
Y INV Q233
DLY BUFF Q234
Y OUT
ARC SW2 Q213
ARC SW1 Q212
BIAS Q214
+9V
9V REG Q240,Q240
+12V
D211
D210
TRAP SW1,2 Q210,211
TRAP SW Q221
BURST OUT
SECAM H
TO A BOARD
IC401 SECAM-DEMD
SECAM
BELL-FILT IN Q408
T401
SEC R-Y INV Q404
SEC R-Y BUFF Q403
R-Y (SECAM)
SEC B-Y INV Q407
SEC B-Y BUFF Q406
B-Y (SECAM)
COL BLK 1-3 Q409-411
60 SW Q260
H PLS-KIL Q280
FPG280
FBP
PULS x SW
PLS
DL GATE Q401,402
SECAM H Q405
SECAM KIL Q222
SEP270
COM
SECAM OL
SECAM SW
IN
IC261
PAL/SEC BUFF Q265
NTSC B-Y Q262
NTSC INV Q264
NTSC R-Y Q263
IC260
R-Y BUFF Q259
V (R-Y)
B-Y BUFF Q258
U (B-Y)
50 SW Q261
PLS CROSS SW
H RETRACE PLS
H PLS

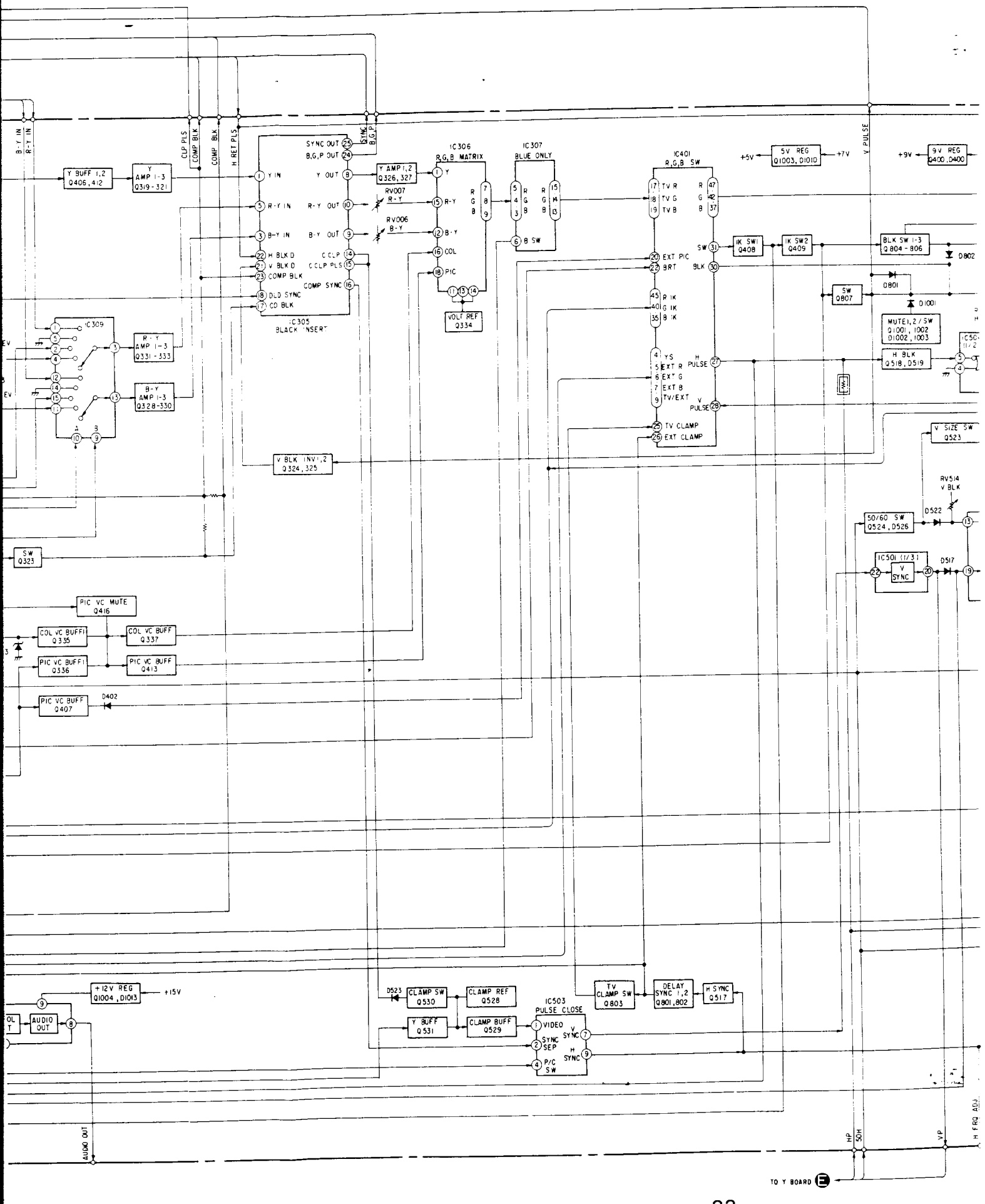

IC1500 50/60 SW
VP
V PULSE Q1500
HP
H PULSE Q1501
60
50/60 SW Q1502
OUT
TO A BOARD
(50/60 DISTINCTION)
Y

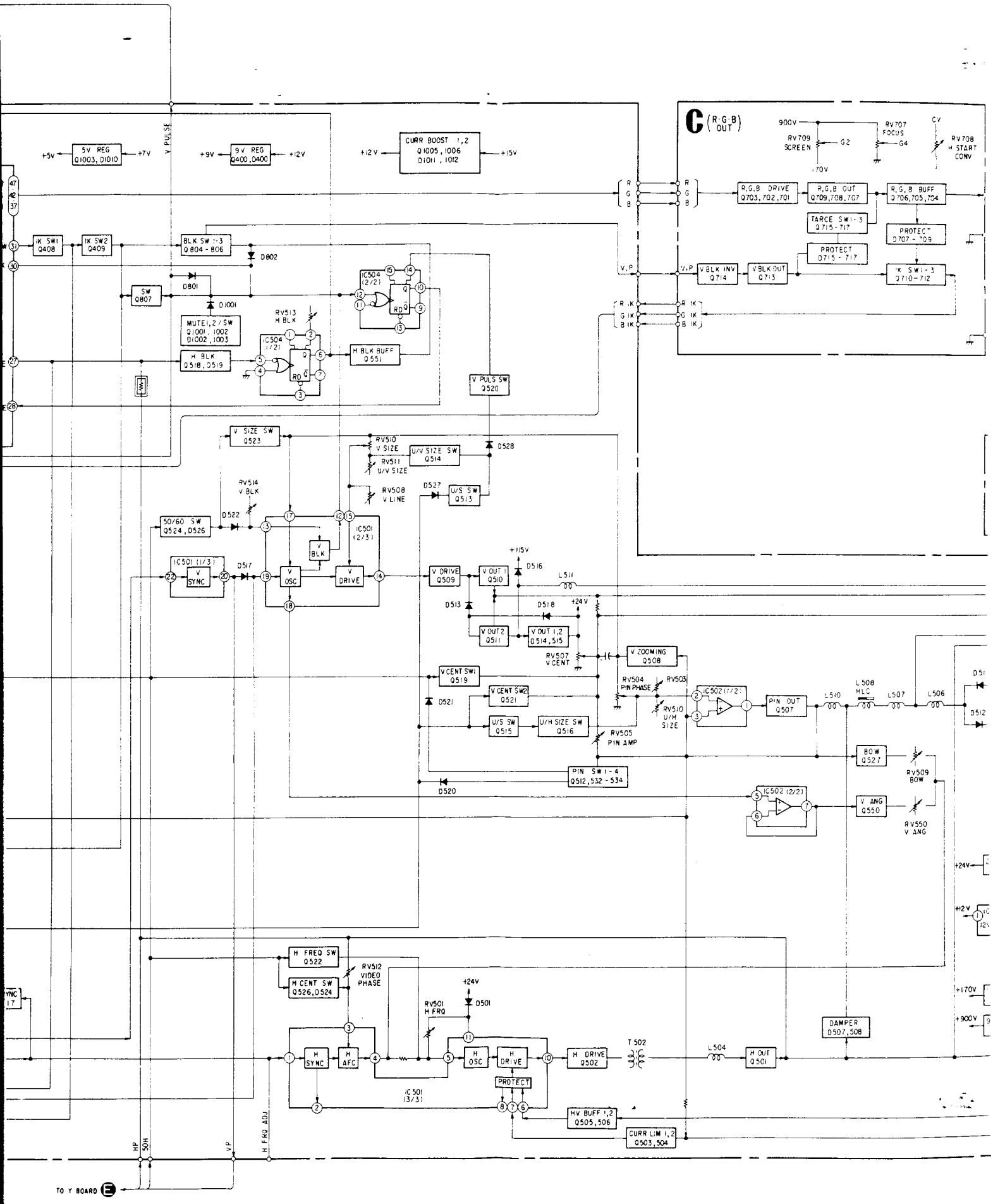
PVM-1440QM

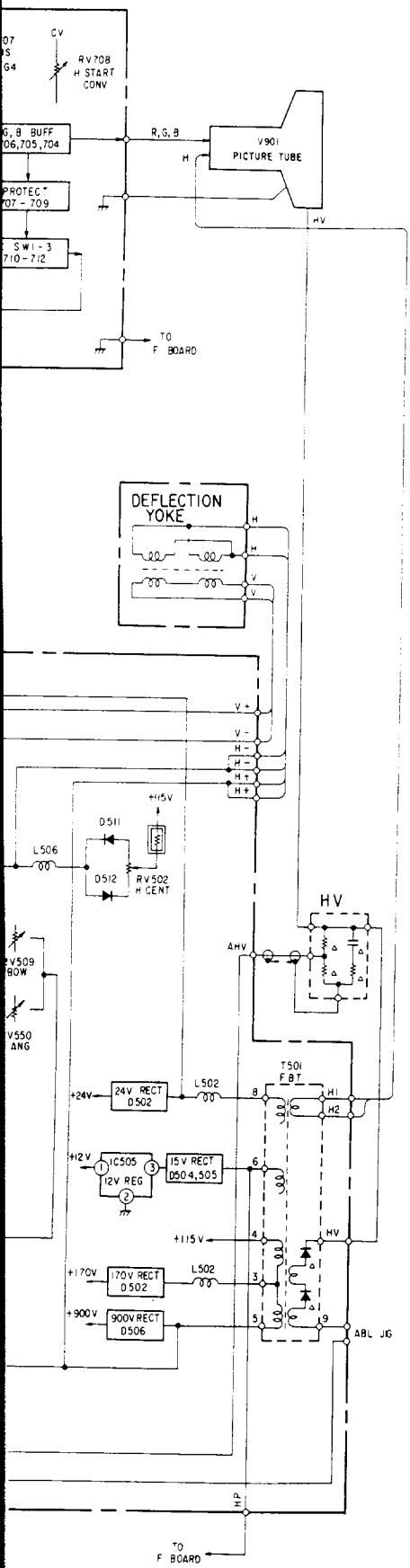

IC1600 DYNAM-PIC
IN
C/B
BGP
Y AMP 1,2 Q1600,1601
Y OUT BUFF Q1602
OUT
TO A BOARD
(DYNAMIC PICTURE)
U


TO U BOARD (PVM-1440QM) F
TO BA BOARD D
TO BA BOARD C
TO QB BOARD (PVM-1444QM)
TO QD BOARD (PVM-1442QM)
TO QG BOARD (PVM-1440QM) A
W (3.58/4.43 DISTINCTION)
IC1400
4.43 OUT
V PULSE
V SYNCHRO SW Q1400
SYS SELEC Q1401
KILLER OUT
KILLER IN
D1401
D1400
SYS KILLER
BURST GATE
KILLER SW Q1402
COL CONT KIL Q1403
COLOR OUT
XA (CRYSTAL OSC)
X443 CV4
L1302
L1300
L1303
L1301
BUFF Q1300
X358 CV3
4.43 GATE 1,2 Q 302,,304
4.43H
SELECT SW Q1301
3.58 GATE 1,2 Q1303, 305
EXT R OUT
EXT B OUT
RV1709 R BKG
RV1708 B BKG
R CLAMP Q1709
B CLAMP Q1708
CLP PLS
EXT R IN
EXT B IN
R BUFF Q1710
B BUFF Q1711
SUB BRT
RV1710 SUB BRT
9300/6500
COL TEMP SW5 Q1706
COL TEMP SW6 Q1707
COL TEMP SW3 Q1702
COL TEMP SW4 Q1703
COL TEMP SW2 Q1701
COL TEMP SW1 Q1700
RV1705 R BKG
RV1704 B BKG
RV1707 R BKG
RV1706 B BKG
RV1703 R DRV
RV1702 B DRV
RV1701 R DRV
RV1700 B DRV
R IK
G IK
B IK
D1703
D1704
D1702
D1701
D1706
D1708
D1705
D1707
D1700
SW
1K SW1 Q1704
1K SW2 Q1705
V (WHITE BALANCE)
FE (POWER)
START Q611
D612
D613
TO A BOARD
HP
FQ SHIFT Q615
CURRENT Q612
IC601
OSC
REMOTE
SOFT START RESET Q617
SOFT START
CLAMP
ECL
LATCH
OUT PUT
DRIVE Q614
T602
CONV TR Q613
T603 SRT
+B RECT D651
PS602
+115V
7V RECT D652
+7V
15V RECT D653
+15V
IC602
D654
IC651
RV601 115V ADJ
AC IN
F601
T605
T604
D601
POWER SWITCH
TO C BOARD
TO CONTROL UNIT
SECAM H
4.43 H
SHARP
BRT
COL
HUE
PIC
VOL
GND
B GAIN
G GAIN
R GAIN
B BIAS
G BIAS
R BIAS
SYS KILLER
SIRCS
POWER
GND
EXT SYNC
U/S
H-V DL
B/O
COMP/RGB SW
S BP
LINE B
LINE A
+12V
+5V
50H
TO QB BOARD (PVM-1444QM)
TO QD BOARD (PVM-1442QM)
TO QG BOARD (PVM-1440QM) B


TO U BOARD (PVM-1440QM) F
TO BA BOARD D
TO BA BOARD C
TO QB BOARD (PVM-1444QM)
TO QD BOARD (PVM-1442QM)
TO QG BOARD (PVM-1440QM) A
COMPOSITE
SY OUT
SC OUT
Y OUT
S SW
BURST OUT
ACC OUT
Y IN
Y OUT
KILLER OUT
B-Y IN
R-Y IN
COMPOSITE
COMPOSITE Y IN
Y IN
SY IN
DL301
SY AMP 3 Q306-308
IC303
Y SW
Y BUFF Q318
D308
IC304 SHARPNESS
IN
OUT
CONTROL
Y BUFF 1,2 Q406,412
ACC IN
SC IN
S SW
COMPOSITE SEL IN
IC312
CHROMA BUFF Q305
CHROMA BUFF Q309
IC302
LIN
ACC OUT
BURST GATE
ACC ADJ
BURST OUT
RV002 ACC
IC311
SECAM H
SECAM SW Q311
SECAM SW Q411
BURST MUTE Q410
D302
COL KILLER Q310
IC301 CHROMA
BURST GATE
KILLER
R-Y DEM
B-Y DEM
H PLS
BURST
R-Y BUFF Q313
B-Y BUFF Q312
RV004 R-Y DEM LEV
RV003 B-Y DEM LEV
IC309
V (R-Y)
U (B-Y)
H PLS
BURST IN
COMPOSITE R-Y
COMPOSITE B-Y
D305
D306
D304
COL SW2 Q317
COL SW1 Q316
RV005 SUB SHARP
SHARP VL BUFF Q414
COMP SW Q322
SW Q323
SW Q338
PLS X SW
AUDIO IN
KILLER H
KILLER IN
4.43 IN
4.43 OUT
4.43 OUT
S BP
SIRCS
HUE CONT
50H
SW Q415
D1014
PIC VC MUTE Q416
COL VC BUFF Q335
PIC VC BUFF Q336
PIC VC BUFF Q407
D403
D402
A-5
SECAM H
4.43 H
SHARP
BRT
COL
HUE
PIC
VOL
GND
B GAIN
G GAIN
R GAIN
B BIAS
G BIAS
R BIAS
PIC SW Q401
BRT SW Q402
BRT SHIFT Q403
IC308
R GAIN
G GAIN
B GAIN
R BIAS
G BIAS
B BIAS
R IK
G IK
B IK
SW
PIC ABL Q404
BRT ABL Q405
D401
TO CONTROL UNIT
A-4
SYS KILLER
SIRCS
POWER
GND
EXT SYNC
U/S
H-V DL
B/O
COMP/RGB SW
S BP
LINE B
LINE A
+12V
+5V
50H
D404
D405
D303
D309
H/V DL SW Q314
DYNAM PIC SW Q315
REF VOLT Q300
R CLAMP Q302
B CLAMP Q304
R BUFF Q303
B BUFF Q301
+12V REG Q1004, D1013
IC1001
DC VOL ATT
AUDIO OUT
PS602
+115V
+7V
+15V
D654
RV601 115V ADJ
TO C BOARD
TO QB BOARD (PVM-1444QM) TO QD BOARD (PVM-1442QM) TO QG BOARD (PVM-1440QM) B
A SIGNAL, DEAL WITH DEFLECTION SYSTEM
LINE B
EXT SYNC
COMP/RGB SW
R
B
SYNC IN
H BLK
V HOLD
YS
G
TV/EXT
W/B SEL
W/B SEL
EXT B OUT
EXT R OUT
EXT R IN
EXT B IN
R IK
G IK
B IK
SUB BRT
SW
AUDIO OUT

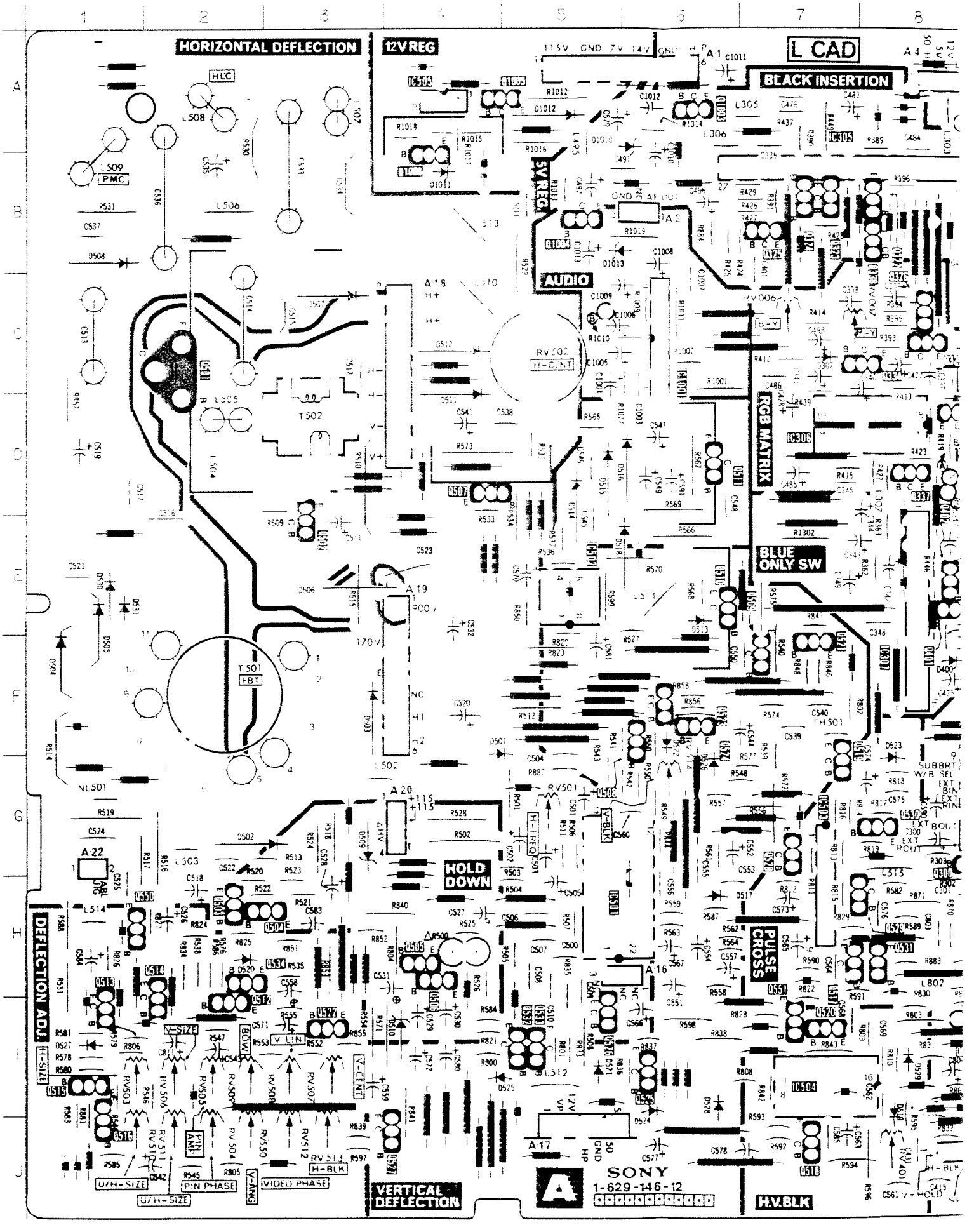

B-Y IN
R-Y IN
CLP PLS
COMP BLK
COMP BLK
H RET PLS
SYNC
B.G.P
Y BUFF 1,2 Q406,412
Y AMP 1-3 Q319-321
SYNC OUT
B,G,P OUT
Y IN
R-Y IN
B-Y IN
H BLK D
V BLK D
COMP BLK
DLD SYNC
CO BLK
Y OUT
R-Y OUT
B-Y OUT
C CLP
C CLP PLS
COMP SYNC
IC305 BLACK INSERT
Y AMP 1,2 Q326,327
RV007 R-Y
RV006 B-Y
IC306 R,G,B MATRIX
VOLT REF Q334
IC307 BLUE ONLY
B SW
IC401 R,G,B SW
TV R
TV G
TV B
EXT PIC
BRT
R IK
G IK
B IK
Y S
EXT R
EXT G
EXT B
TV/EXT
H PULSE
V PULSE
TV CLAMP
EXT CLAMP
+5V
5V REG Q1003, D1010
+7V
V PULSE
+9V
9V REG Q400, D400
IK SW1 Q408
IK SW2 Q409
BLK SW 1-3 Q804-806
D802
SW Q807
D801
D1001
MUTE 1,2/SW Q1001, 1002 D1002, 1003
H BLK Q518, D519
V SIZE SW Q523
RV514 V BLK
D522
50/60 SW Q524, D526
IC501 (1/3) V SYNC
D517
IC309
R-Y AMP 1-3 Q331-333
B-Y AMP 1-3 Q328-330
V BLK INV 1,2 Q324, 325
SW Q323
PIC VC MUTE Q416
COL VC BUFF 1 Q335
COL VC BUFF Q337
PIC VC BUFF 1 Q336
PIC VC BUFF Q413
PIC VC BUFF Q407
D402
+12V REG Q1004, D1013
+15V
AUDIO OUT
AUDIO OUT
D523
CLAMP SW Q530
CLAMP REF Q528
Y BUFF Q531
CLAMP BUFF Q529
IC503 PULSE CLOSE
VIDEO
SYNC SEP
P/C SW
V SYNC
H SYNC
TV CLAMP SW Q803
DELAY SYNC 1,2 Q801, 802
H SYNC Q517
HP
50H
VP
H FRQ ADJ
TO Y BOARD E


C (R·G·B) OUT
5V REG Q1003, D1010
9V REG Q400, D400
CURR BOOST 1,2 Q1005, 1006 D1011, 1012
+5V
+7V
+9V
+12V
+12V
+15V
V PULSE
900V
RV709 SCREEN
G2
RV707 FOCUS
G4
CV
RV708 H START CONV
170V
R,G,B DRIVE Q703, 702, 701
R,G,B OUT Q709, 708, 707
R,G,B BUFF Q706, 705, 704
TARGE SW1-3 Q715-717
PROTECT Q707-709
PROTECT Q715-717
IK SW1-3 Q710-712
V BLK INV Q714
V BLK OUT Q713
IK SW1 Q408
IK SW2 Q409
BLK SW 1-3 Q804-806
D802
D801
D1001
SW Q807
MUTE1,2/SW Q1001, 1002 D1002, 1003
H BLK Q518, D519
RV513 H BLK
IC504 (2/2)
IC504 (1/2)
H BLK BUFF Q551
V PULS SW Q520
V SIZE SW Q523
RV510 V SIZE
U/V SIZE SW Q514
RV511 U/V SIZE
D528
RV514 V BLK
RV508 V LINE
D527
U/S SW Q513
D522
50/60 SW Q524, D526
IC501 (2/3)
V BLK
IC501 (1/3)
V SYNC
D517
V OSC
V DRIVE
V DRIVE Q509
V OUT1 Q510
+11.5V
D516
L511
D513
D518
+24V
V OUT2 Q511
V OUT1,2 Q514, 515
RV507 V CENT
V ZOOMING Q508
V CENT SW1 Q519
V CENT SW2 Q521
D521
U/S SW Q515
U/H SIZE SW Q516
RV504 PIN PHASE
RV503
RV510 U/H SIZE
RV505 PIN AMP
IC502 (1/2)
PIN OUT Q507
L510
L508 HLC
L507
L506
D511
D512
PIN SW1-4 Q512, 532-534
D520
BOW Q527
RV509 BOW
IC502 (2/2)
V ANG Q550
RV550 V ANG
+24V
+12V
+170V
+900V
H FREQ SW Q522
H CENT SW Q526, D524
RV512 VIDEO PHASE
RV501 H FRQ
+24V
D501
H SYNC
H AFC
H OSC
H DRIVE
PROTECT
IC501 (3/3)
H DRIVE Q502
T502
L504
H OUT Q501
DAMPER D507, 508
HV BUFF 1,2 Q505, 506
CURR LIM 1,2 Q503, 504
HP
50H
V.P
H FRQ ADJ
TO Y BOARD E


CV
RV708
H START
CONV
R,G,B
V901
PICTURE TUBE
H
HV
TO
F BOARD
DEFLECTION
YOKE
V+
V-
H-
H-
H+
H+
+115V
D511
L506
D512
RV502
H CENT
HV
AHV
T501
F.B.T.
+24V
24V RECT
D502
L502
H1
H2
+12V
IC505
12V REG
15V RECT
D504,505
+115V
+170V
170V RECT
D502
L502
+900V
900V RECT
D506
ABL J/G
HP
TO
F BOARD

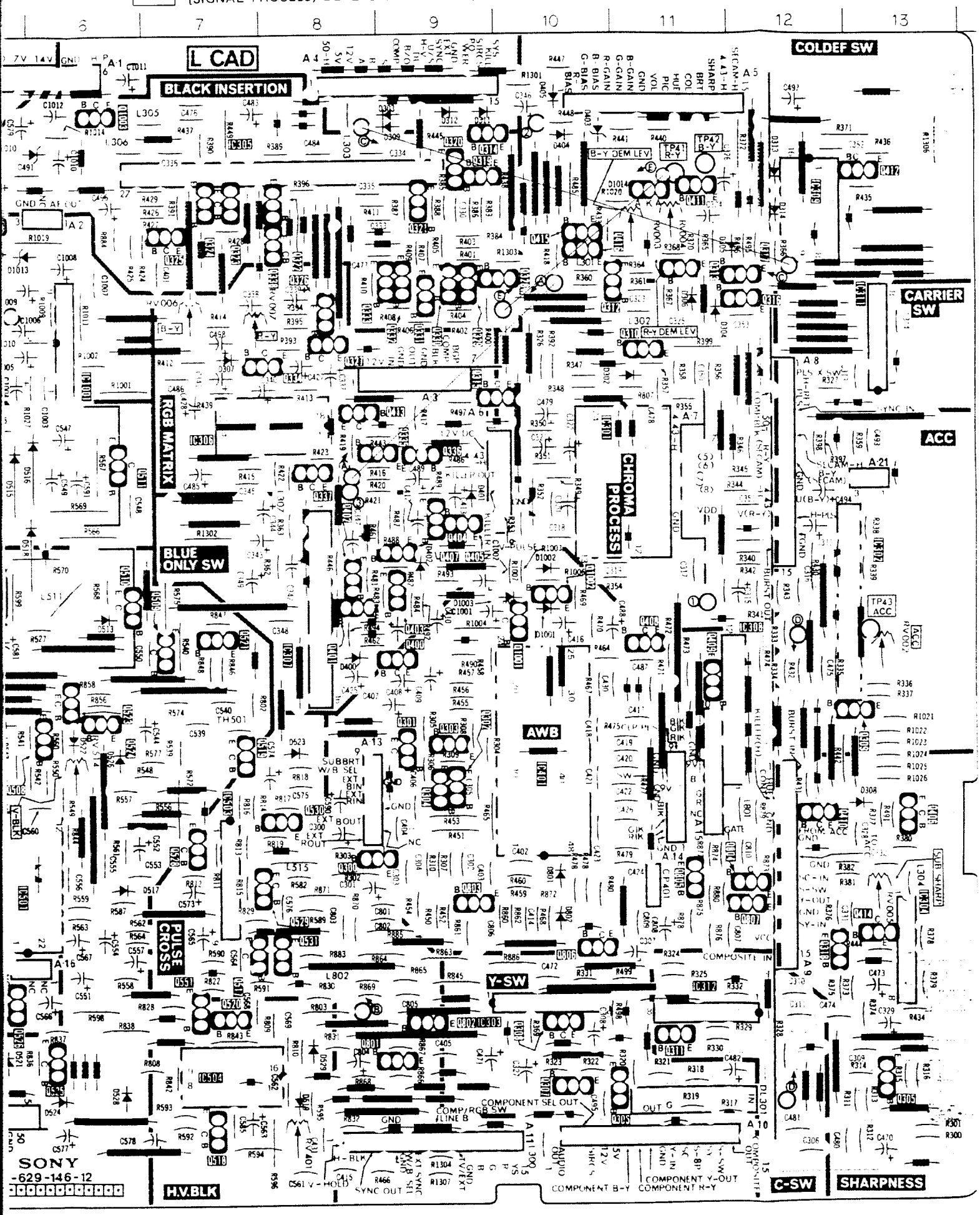
6-3. PRINTED WIRING BOARDS – *Conductor Side* –
– A Board –

A [SIGNAL PROCESS, DEFL



A

[SIGNAL PROCESS, DEFLECTION SYSTEM]



IC

IC301	D-11
IC302	E-13
IC303	I-10
IC304	H-13
IC305	B-7
IC306	D-8
IC307	E-8
IC308	F-12
IC309	B-12
IC311	C-13
IC312	I-11
IC401	G-10
IC501	H-5
IC502	E-5
IC503	H-7
IC504	I-7
IC505	A-4
IC1001	C-6

TRANSISTOR

Q300	G-8
Q301	G-9
Q302	G-9
Q303	G-9
Q304	G-9
Q305	I-13
Q306	I-11
Q307	I-10
Q308	I-10
Q309	I-13
Q310	C-11
Q311	I-11
Q312	C-11
Q313	B-11
Q314	A-9
Q315	D-9
Q316	C-12
Q317	C-12
Q318	H-12
Q319	B-9
Q320	B-9
Q321	B-9
Q322	B-8
Q323	B-7
Q324	B-7
Q325	B-7
Q326	C-8
Q327	C-8
Q328	C-9
Q329	C-9
Q330	C-9
Q331	C-9
Q332	C-9
Q333	C-9
Q334	C-8
Q335	D-9
Q336	D-9
Q337	D-8
Q338	B-8
Q400	F-9
Q401	E-8
Q402	E-8
Q403	E-9
Q404	E-9
Q405	E-9
Q406	G-13
Q407	E-9
Q408	F-11
Q409	F-11
Q410	G-12
Q411	B-11
Q412	B-13
Q413	D-8
Q414	H-13
Q415	B-10
Q416	B-10
Q501	C-2
Q502	E-3
Q503	H-2
Q504	H-2
Q505	H-4
Q506	H-4
Q507	D-4
Q508	F-6
Q509	F-7
Q510	E-6
Q511	D-6
Q512	I-2
Q513	I-1
Q514	I-2
Q515	I-1
Q516	J-1
Q517	H-7
Q518	J-7
Q519	G-7
Q520	I-7
Q521	F-7
Q522	I-3
Q523	F-6
Q524	F-6
Q525	I-6
Q526	I-5
Q528	G-7
Q529	H-8
Q530	G-8
Q531	H-8
Q532	I-5
Q533	I-5
Q534	H-2
Q550	H-1
Q551	I-7
Q801	I-9
Q802	I-9
Q803	H-9
Q804	H-12
Q805	H-11
Q806	H-10
Q807	H-12
Q1001	E-10
Q1002	E-10
Q1003	A-6
Q1004	B-5
Q1005	A-4
Q1006	B-4

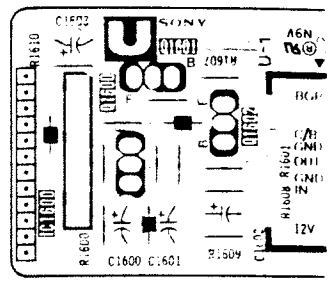
DIODE

D302	C-11
D303	A-9
D304	C-12
D305	B-11
D306	C-11
D307	C-7
D308	G-13
D309	A-9
D311	A-9
D312	A-9
D400	F-8
D401	D-9
D402	E-9
D403	A-10
D404	A-10
D405	A-10
D501	G-4
D502	G-2
D503	F-3
D504	F-1
D505	E-1
D506	E-3
D507	C-3
D508	B-1
D509	G-3
D510	I-4
D511	D-4
D512	C-4
D513	E-6
D514	D-5
D515	D-4
D516	D-6
D517	H-6
D518	E-6
D519	J-8
D520	H-2
D521	I-5
D522	F-6
D523	G-8
D524	J-6
D526	G-6
D527	I-1
D528	I-6
D529	I-8
D530	E-1
D531	E-1
D801	H-10
D802	H-10
D1001	E-10
D1002	E-10
D1003	E-10
D1010	A-6
D1011	B-4
D1012	A-5
D1013	B-5
D1014	B-11

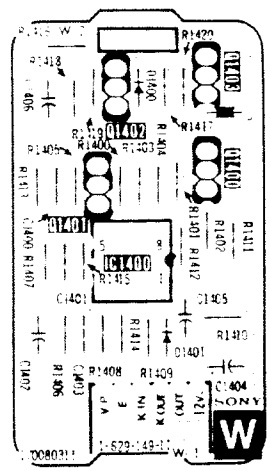
VARIABLE RESISTOR

RV002	E-13
RV003	B-11
RV004	B-11
RV005	H-13
RV006	C-7
RV007	C-7
RV501	G-5
RV502	C-5
RV503	I-1
RV504	J-2
RV505	I-2
RV506	I-2
RV507	I-3
RV508	I-3
RV509	I-2
RV510	J-1
RV511	J-2
RV512	J-3
RV513	J-3
RV514	G-6
RV550	J-2

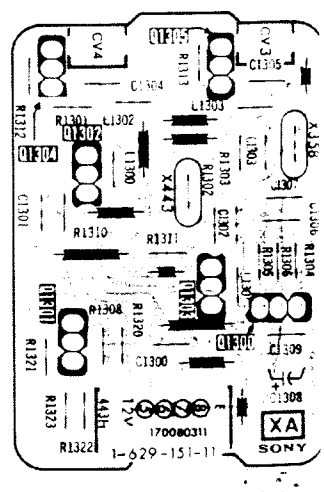
— U Board — (PVM-1440QM



— W Board —

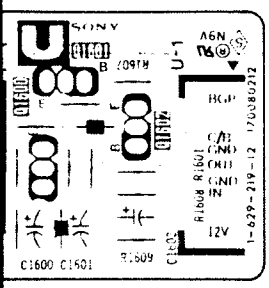


— XA Board —

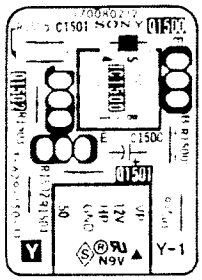


U [DYNAMIC PICTURE] W [3.58/4.43 DISTINCTION] XA [CRYSTAL OSC] Y [50/60 DISTINCTION]

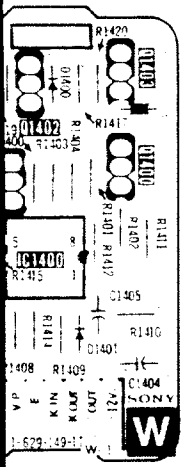
oard — (PVM-1440QM)



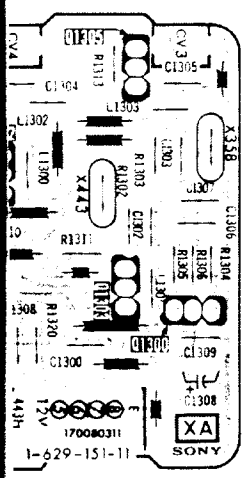
— Y Board —



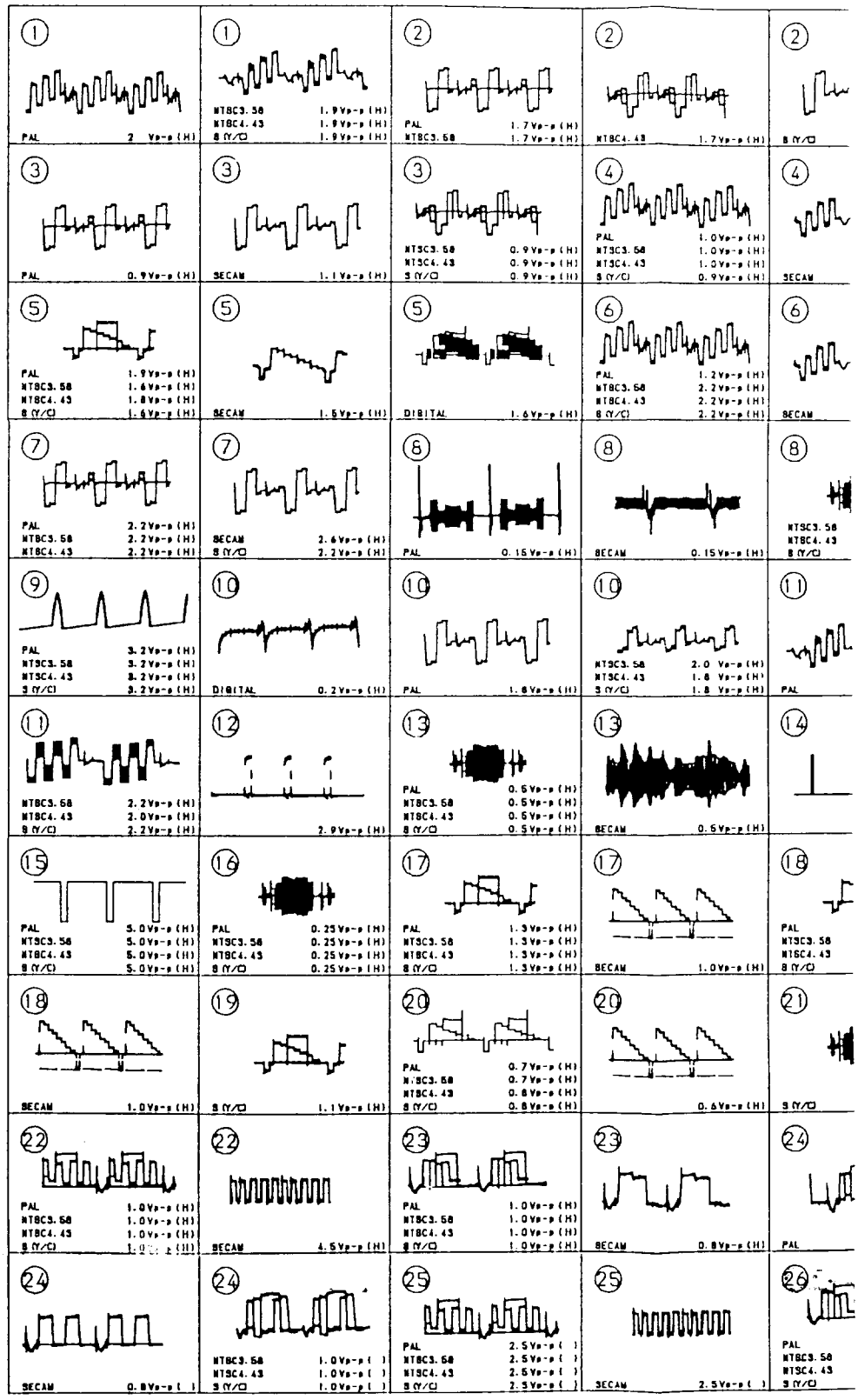
oard —

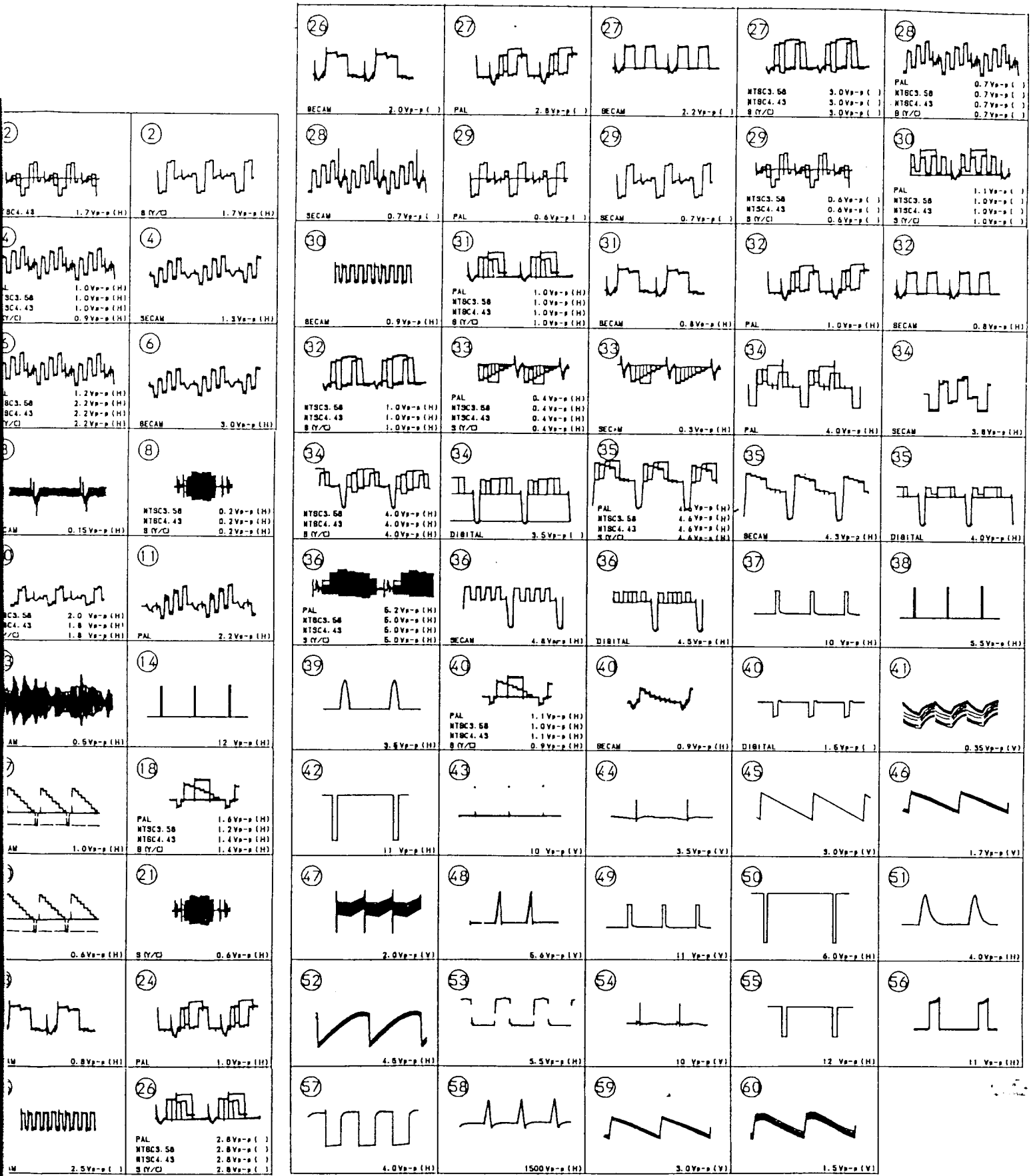


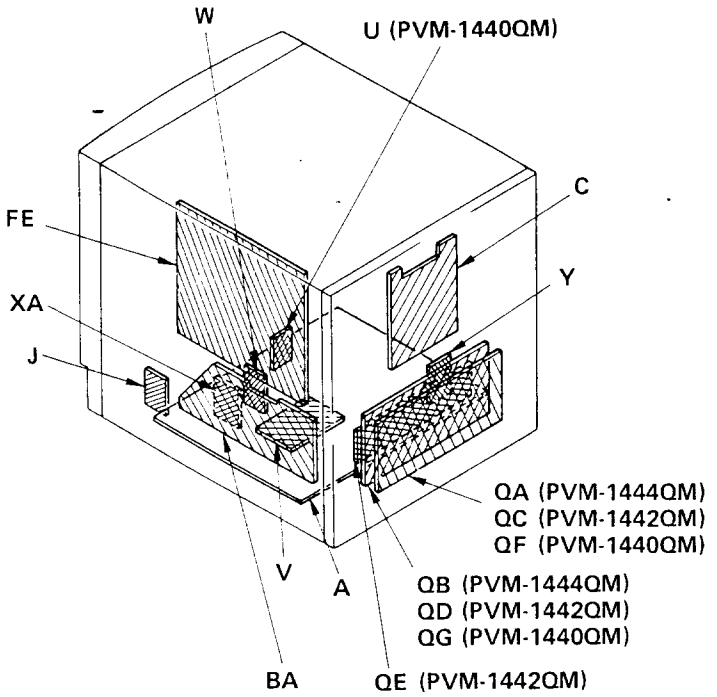
Board —



A BOARD WAVEFORM







The inner schematic diagrams (IC302, 304, 305, 307, 308, 503): See page 66–68

Note :

All capacitors are in μF unless otherwise noted.
pF : μμF 50 WV or less are not indicated except for electrolytics.
Indication of resistance, which does not have one for rating electrical power, is as follows.

Pitch : 5 mm Rating electrical power 1/4W

All resistors are in ohms.
: nonflammable resistor.
: fusible resistor.
△ : internal component.
: panel designation and adjustment for repair.
All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
When replacing the part in below table be sure to perform the related adjustment.

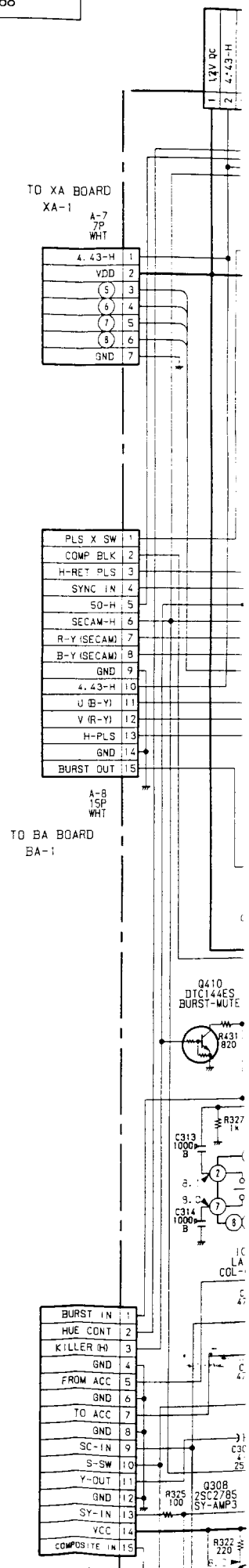
Part replaced	Adjustment (※)
IC501, Q503, Q504, Q505, Q506, D509, D510, C505, C520, C524, C525, C526, C527, C528, C529, C530, C531, R500, R506, R516, R517, R518, R519, R520, R521, R522, R523, R524, R525, R526, R528, R804, NL501, HVR	R500 (HOLD-DOWN)

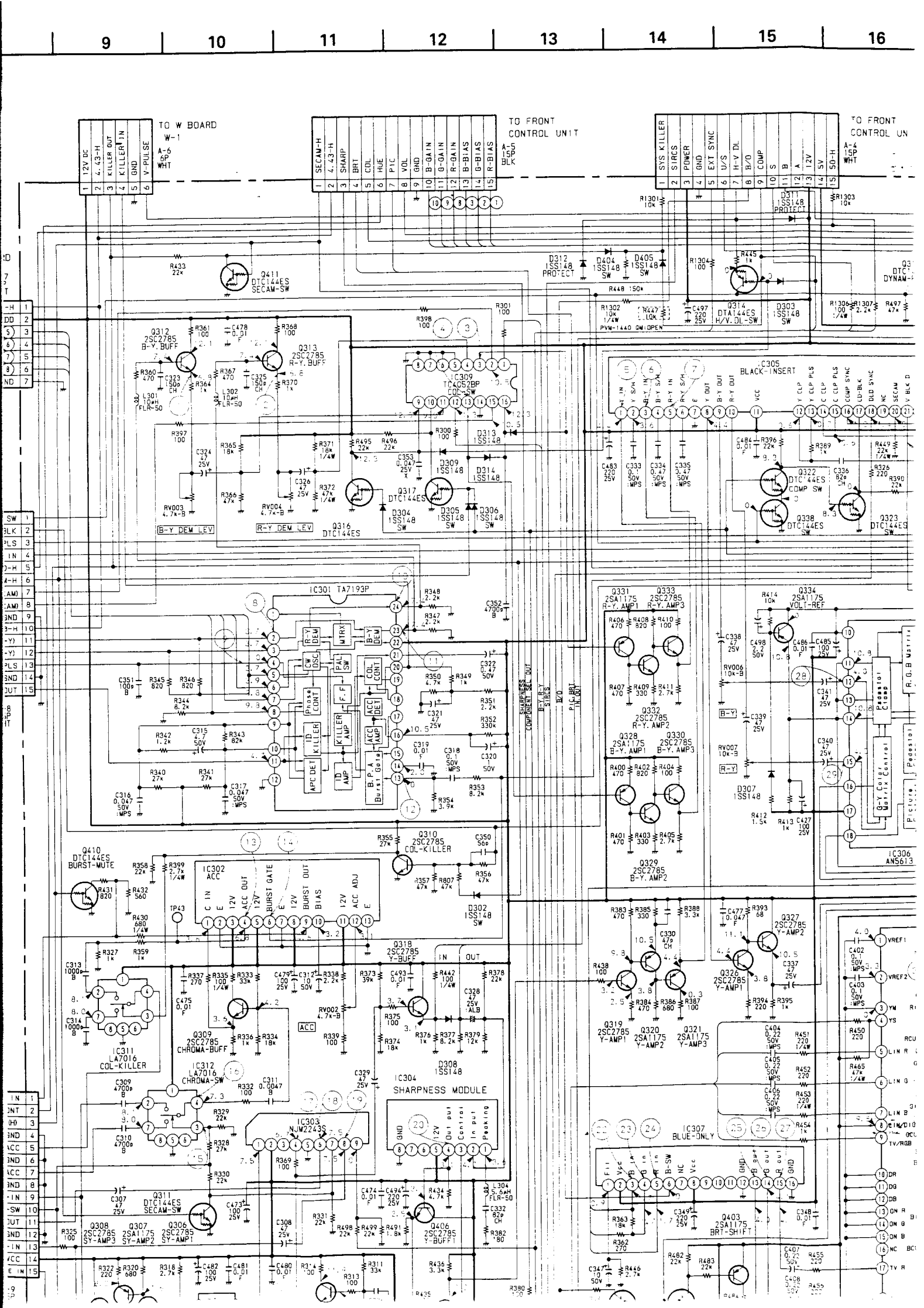
All voltages are in V.
Voltage are dc with respect to ground unless otherwise noted.
Readings are taken with a color-bar signal input.
Readings are taken with a PAL color-bar signal input.
Voltage variations may be noted due to normal production tolerance.
: B+ bus.
: B− bus.
: signal path.
No mark : with PAL color-bar signal received or common voltage.
( ) : with SECAM color-bar signal received.
( ) : with NTSC 3.58 color-bar signal received.
( ) : with NTSC 4.43 color-bar signal received.

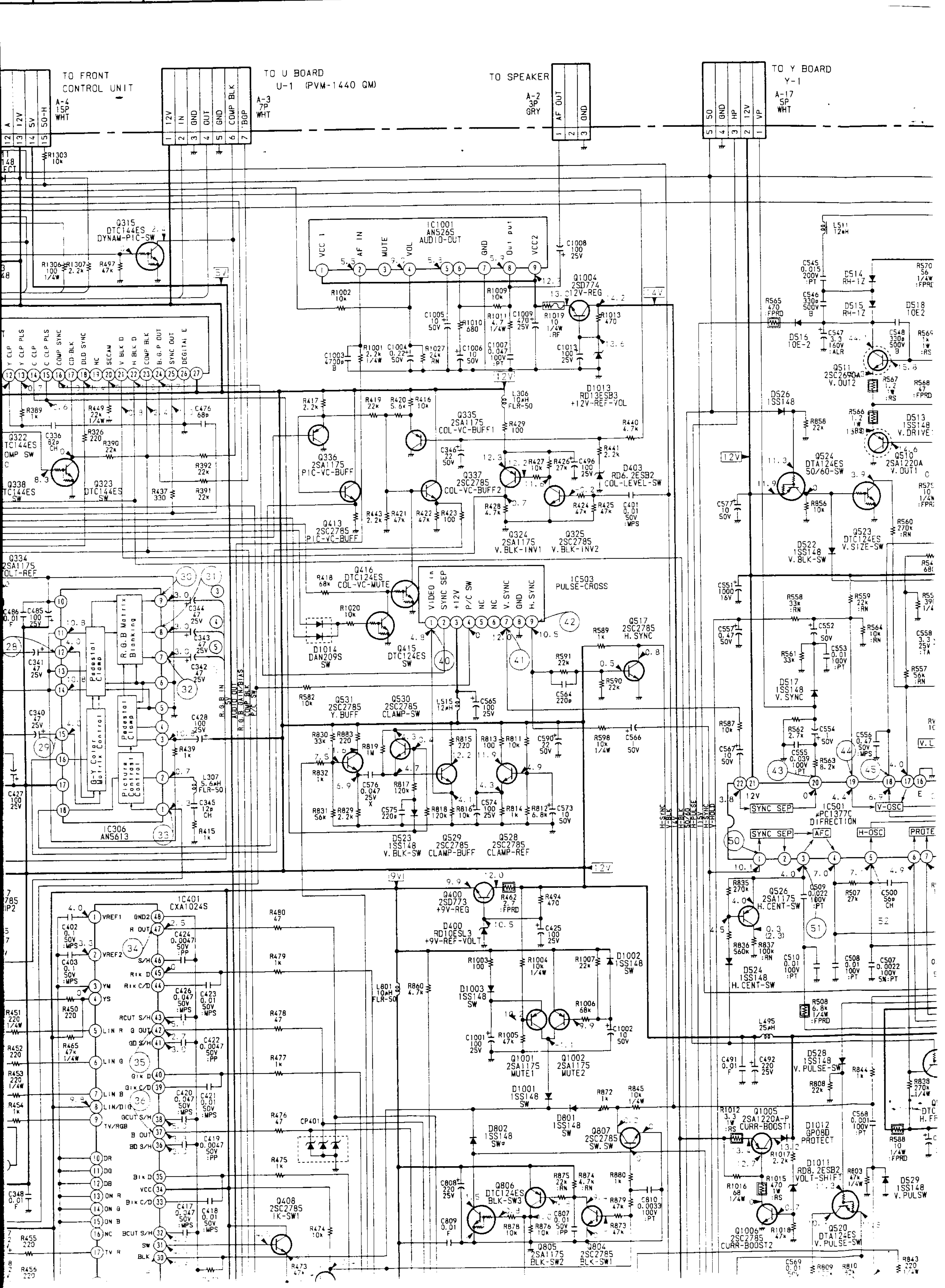
A BOARD

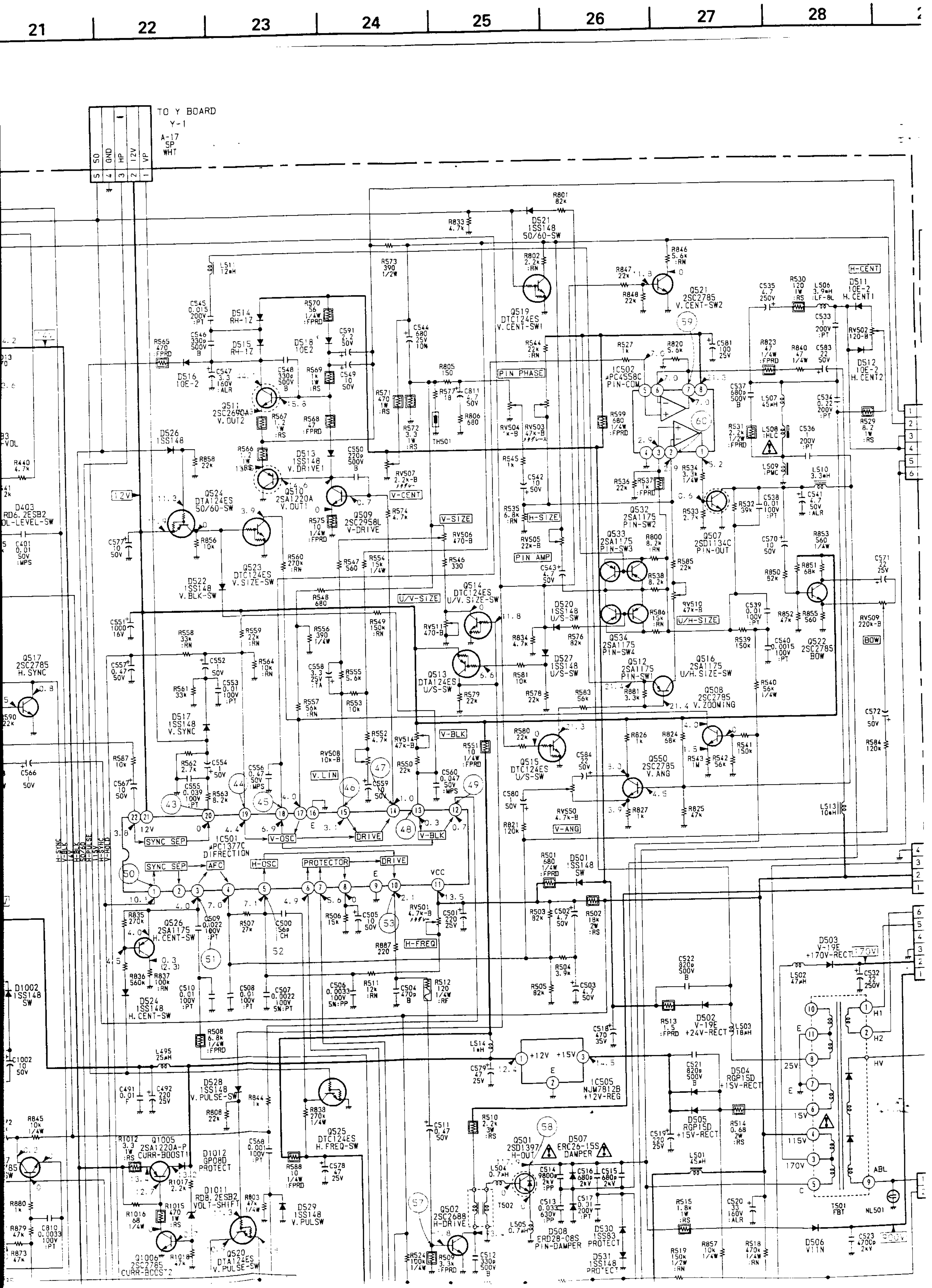
IC NO.	PIN NO.	PAL	SECAM	NTSC 3.58	NTSC 4.43	S-VIDEO	DIGITAL
IC301	(1) (2)	8.6	8.6	8.6	8.6	8.6	8.6
	(22)	8.4	8.2	8.4	8.4	8.4	8.2
	(24)	6.5	7.5	6.5	6.8	6.5	7.5
IC302	(1)	1.4	1.4	1.4	1.4	1.4	2.3
IC303	(1)	0	0	0	0	3.8	5.4
IC304	(1)	0	2.8	2.4	2.2	2.4	2.4
IC305	(2)	7.0	10.2	7.0	7.0	7.0	7.0
	(4)	6.4	9.6	6.4	6.4		
	(5)	6.9	10.2	6.9	6.9	6.9	6.9
	(6) (10)	6.3	9.6	6.4	6.4	6.4	6.4
	(7) (9)	6.8	10.0	6.8	6.9		
IC306	(12)	7.9	9.5	7.4	6.1	6.1	6.1
	(16)	6.4	6.3	5.3	5.0	5.0	5.1
IC309	(1)	1.1	1.7	3.0	1.4	1.5	
	(3)	5.1	10.5	9.1	9.1	9.1	
	(4)	9.1	8.9	9.1	9.1	9.1	
	(10)	12.3	0	12.3	12.3	12.3	
	(13)	9.1	10.5	9.1			
IC311	(1)	4.3	3	4.3	4.3	4.3	0
	(4)	7.3	7.3	7.3	7.3	7.3	8.2
IC312	(1)	0	0	0	0	4.9	5.5
IC401	(2)	0.9	0.9	0.9	0.9	0.9	1.1
	(5) (13) (17)	3.9	4.4	4.4	4.4	4.4	4.8
	(9)	4.4	5.3	5.3	5.3	5.3	0
	(11) (15) (19)	5.3	5.7	5.7	5.0	5.0	5.1
	(27)	5.0	5.7	5.5	3.5	2.6	2.6
	(31)	4.3	1.2	1.2	0.8	0.6	0.6
	(35)	0.7	0.2	0.3	0	0	0
	(39)	0.4	0.8	1.1	0.7	0.7	0.7
	(43)	0.3	0.2	0.3	0	0	0
	(44)	0.3	1.0	0.7	0.5	0.6	0.6
	(45)	2.5	3.1	3.2	3.1	3.0	3.0
IC503	(1)	2.3	1.0	1.0	1.0	1.0	1.6

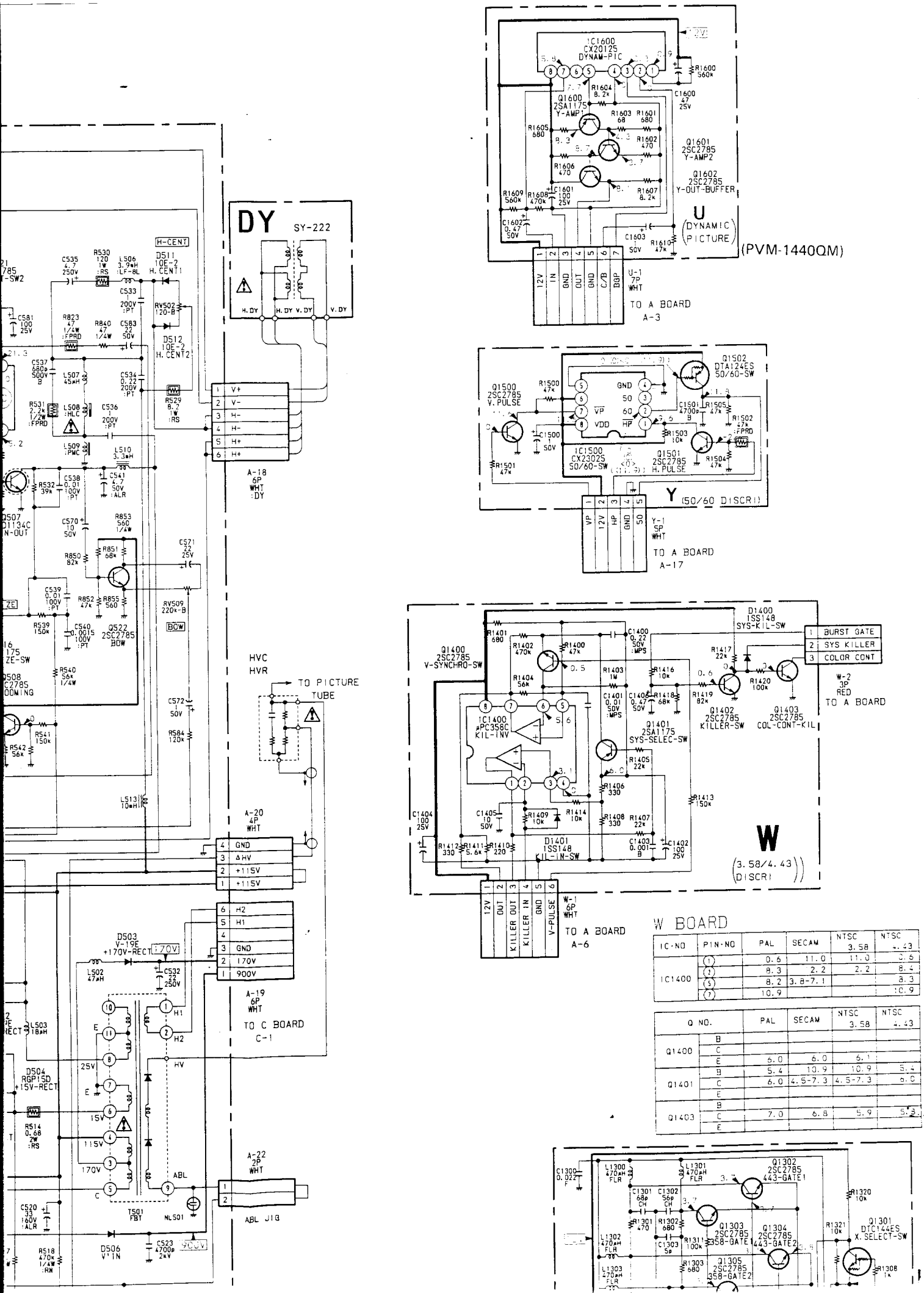
Q NO.		PAL	SECAM	NTSC 3.58	NTSC 4.43	S-VIDEO	DIGITAL
Q310	B	4.3	0	4.3	4.3		
	C	0.2	0	0.2	0.2		
	E						
Q316	B	0	0.2	0.3	0	0	0
	C						
	E						
Q317	B	0	11.7	0.3	0	0.3	0
	C	12.3	0.1	12.3	12.3	12.3	12.3
	E						
Q322	B						
	C	0	0.2	0.3	0	0	0
	E						
Q323	B	0	0.2	0.3	0	0	0
	C						
	E						
Q328	B	9.1	10.5	9.1	9.1		
	C	2.5	11.2	2.5	2.5		
	E	9.8	11.1	9.8	9.8		
Q329	B	2.5	1.1	2.5	2.5		
	C	7.5	10.4	7.5	7.5		
	E	7.7	10.1	7.7	7.7		
Q330	B	7.8	10.4	7.8	7.8		
	C	13.0	0.1	13.0	13.0		
	E	7.2	9.8	7.2	7.2		
Q331	B	7.1	0.5	7.1	7.1		
	C	0.1	0.1	0.1	0.1		
	E	7.7	0.1	7.7	7.7		
Q332	B	0	0	0	0		
	C	12.3	0.1	12.3	12.3		
	E	0	0	0	0		
Q333	B	0	0.2	0.3	0		
	C	12.3	0.1	12.3	12.3		
	E	0	0	0	0		




9
10
11
12
13
14
15
16
TO W BOARD
W-1
A-6
6P
WHT
12V DC
4.43-H
KILLER OUT
KILLER IN
GND
V-PULSE
TO FRONT
CONTROL UNIT
A-5
15P
BLK
SECAM-H
4.43-H
SHARP
BRT
CDL
HUE
PIC
VOL
GND
B-GAIN
G-GAIN
R-GAIN
B-BIAS
G-BIAS
R-BIAS
TO FRONT
CONTROL UN
A-4
15P
WHT
SYS KILLER
SIRCS
POWER
GND
EXT SYNC
U/S
H-V DL
B/O
COMP
S
B
A
12V
5V
50-H
Q411
DTC144ES
SECAM-SW
D311
1SS148
PROTECT
D312
1SS148
PROTECT
D404
1SS148
SW
D405
1SS148
SW
Q314
DTA144ES
H/V.DL-SW
D303
1SS148
SW
Q312
2SC2785
B-Y.BUFF
Q313
2SC2785
R-Y.BUFF
IC309
TC4052BP
COL-SW
L301
10mH
FLR-50
L302
10mH
FLR-50
C305
BLACK-INSERT
Q322
DTC144ES
COMP SW
Q338
DTC144ES
SW
Q323
DTC144ES
SW
B-Y DEM LEV
R-Y DEM LEV
Q316
DTC144ES
IC301 TA7193P
R-Y DEM
B-Y DEM
WTRX
CW OSC
PAL SW
COL CONT
Phase CONT
F.F.
KILLER AMP
ACC DET
ACC AMP
ID KILLER
APC DET
ID AMP
B.P.A Burst Gate
SHARPNESS
COMPONENT SEL OUT
B-Y,R-Y
SIRCS
B/O
PIC BRT
IN OUT
Q331
2SA1175
R-Y.AMP1
Q333
2SC2785
R-Y.AMP3
Q332
2SC2785
R-Y.AMP2
Q328
2SA1175
B-Y.AMP1
Q330
2SC2785
B-Y.AMP3
Q329
2SC2785
B-Y.AMP2
Q334
2SA1175
VOLT-REF
IC306
AN5613
R.G.B Matrix
Pedestal Clamp
B-Y Color Matrix Control
Picture
Q410
DTC144ES
BURST-MUTE
IC302
ACC
C IN
E
12V
ACC OUT
BURST GATE
BURST OUT
BIAS
ACC ADJ
Q310
2SC2785
COL-KILLER
D302
1SS148
SW
Q318
2SC2785
Y-BUFF
IN
OUT
Q309
2SC2785
CHROMA-BUFF
IC311
LA7016
COL-KILLER
IC312
LA7016
CHROMA-SW
IC303
NJW2243S
IC304
SHARPNESS MODULE
D308
1SS148
Q311
DTC144ES
SECAM-SW
Q308
2SC2785
SY-AMP3
Q307
2SA1175
SY-AMP2
Q306
2SC2785
SY-AMP1
Q406
2SC2785
Y-BUFF1
L304
5.6mH
FLR-50
Q327
2SC2785
Y-AMP2
Q326
2SC2785
Y-AMP1
Q319
2SC2785
Y-AMP1
Q320
2SA1175
Y-AMP2
Q321
2SA1175
Y-AMP3
IC307
BLUE-ONLY
Q403
2SA1175
BRT-SHIFT
D307
1SS148
D308
1SS148
D309
1SS148
D313
1SS148
D314
1SS148
D304
1SS148
SW
D305
1SS148
SW
D306
1SS148
SW
D302
1SS148
SW
Q317
DTC144ES


TO FRONT CONTROL UNIT
A-4 15P WHT
TO U BOARD U-1 (PVM-1440 QM)
A-3 7P WHT
TO SPEAKER
A-2 3P GRY
TO Y BOARD Y-1
A-17 5P WHT
IC1001 AN5265 AUDIO-OUT
Q1004 2SD774 12V-REG
D1013 RD13ESB3 +12V-REF-VOL
Q315 DTC144ES DYNAM-PIC-SW
Q322 DTC144ES COMP SW
Q338 DTC144ES SW
Q323 DTC144ES SW
Q336 2SA1175 PIC-VC-BUFF
Q335 2SA1175 COL-VC-BUFF1
Q337 2SC2785 COL-VC-BUFF2
Q413 2SC2785 PIC-VC-BUFF
Q324 2SA1175 V.BLK-INV1
Q325 2SC2785 V.BLK-INV2
D403 RD6.2ESB2 COL-LEVEL-SW
Q334 2SA1175 VOLT-REF
Q416 DTC124ES COL-VC-MUTE
Q415 DTC124ES SW
D1014 DAN209S SW
IC503 PULSE-CROSS
Q517 2SC2785 H.SYNC
IC306 AN5613
Q531 2SC2785 Y.BUFF
Q530 2SC2785 CLAMP-SW
D523 1SS148 V.BLK-SW
Q529 2SC2785 CLAMP-BUFF
Q528 2SC2785 CLAMP-REF
IC401 CXA1024S
Q400 2SD773 +9V-REG
D400 RD10ESL3 +9V-REF-VOLT
D1003 1SS148 SW
D1002 1SS148 SW
Q1001 2SA1175 MUTE1
Q1002 2SA1175 MUTE2
D1001 1SS148 SW
D801 1SS148 SW
D802 1SS148 SW
Q807 2SC2785 SW.SW
Q806 DTC124ES BLK-SW3
Q805 2SA1175 BLK-SW2
Q804 2SC2785 BLK-SW1
Q408 2SC2785 IK-SW1
Q511 2SC2690A V.OUT2
Q510 2SA1220A V.OUT1
D513 1SS148 V.DRIVE
D526 1SS148
Q524 DTA124ES 50/60-SW
Q523 DTC124ES V.SIZE-SW
D522 1SS148 V.BLK-SW
D517 1SS148 V.SYNC
IC501 μPC1377C DIFRECTION
SYNC SEP
AFC
H-OSC
V-OSC
Q526 2SA1175 H.CENT-SW
D524 1SS148 H.CENT-SW
D528 1SS148 V.PULSE-SW
Q1005 2SA1220A-P CURR-BOOST1
D1012 GP08D PROTECT
D1011 RD8.2ESB2 VOLT-SHIFT
Q1006 2SC2785 CURR-BOOST2
Q520 DTA124ES V.PULSE-SW
D529 1SS148 V.PULSW


21
22
23
24
25
26
27
28
TO Y BOARD
Y-1
A-17
5P
WHT
50
GND
HP
12V
VP
R801 82k
R833 4.7k
D521 1SS148 50/60-SW
R846 5.6k :RN
R802 2.2k :RN
R847 22k
R848 22k
Q521 2SC2785 V. CENT-SW2
Q519 DTC124ES V. CENT-SW1
L511 12mH
R573 390 1/2W
C545 0.015 200V :PT
D514 RH-1Z
R570 56 1/4W :FPRD
C591 2.2 50V
C544 680 25V 10K
C546 330p 500V B
D515 RH-1Z
D518 10E2
R565 470 :FPRD
D516 10E-2
C547 3.3 160V :ALR
C548 330p 500V B
R569 1k 1W :RS
C549 10 50V
R805 150
R577 18
C811 4.7 50V
R806 680
R571 470 1W :RS
R572 3.3 1W :RS
TH501
Q511 2SC2690A V. OUT2
R567 1.2 1W :RS
R568 47 :FPRD
D526 1SS148
R858 22k
R566 1.2 1W :RS
D513 1SS148 V. DRIVE1
C550 220p 500V B
RV507 2.2k-B
V-CENT
Q510 2SA1220A V. OUT1
Q509 2SC2958L V-DRIVE
R575 10 1/4W :FPRD
R574 4.7k
12V
Q524 DTA124ES 50/60-SW
Q523 DTC124ES V. SIZE-SW
R856 10k
C577 10 50V
D403 RD6. 2ESB2 VOL-LEVEL-SW
C401 0.01 50V :MPS
R440 4.7k
V-SIZE
RV506 470-B
R546 330
R560 270k :RN
R547 560
R554 15k 1/4W
D522 1SS148 V. BLK-SW
R548 680
U/V-SIZE
Q514 DTC124ES U/V. SIZE-SW
RV511 470-B
C551 1000 16V
R558 33k :RN
R559 22k :RN
R556 390 1/4W
R549 150k :RN
C557 0.47 50V
C552 1 50V
R564 10k :RN
C558 3.3 25V :TA
R555 5.6k
Q513 DTA124ES U/S-SW
R579 22k
Q517 2SC2785 H. SYNC
R590 22k
R561 33k
C553 0.01 100V :PT
D517 1SS148 V. SYNC
R557 56k :RN
R553 10k
R552 4.7k
RV514 47k-B
V-BLK
R551 10 1/4W :FPRD
R587 10k
C566 1 50V
R562 2.7k
C554 1 50V
C556 0.47 50V :MPS
RV508 10k-B
V. LIN
R550 22k
C560 0.047 50V :MPS
C567 10 50V
C555 0.039 100V :PT
R563 8.2k
C559 10 50V
IC501 μPC1377C DIFRECTION
SYNC SEP
V-OSC
DRIVE
V-BLK
AFC
H-OSC
PROTECTOR
VCC
H-SYNC
V-BLK
L4V
H-BLK
50/60
H-PULSE
115V
H-SYNC
V-HOLD
R835 270k
Q526 2SA1175 H. CENT-SW
C509 0.1022 100V :PT
R507 27k
C500 56p CH
R506 15k
C505 10 50V
RV501 4.7k-B
C501 220 25V
R887 220
H-FREQ
R836 560k
R837 100k :RN
D524 1SS148 H. CENT-SW
C510 0.01 100V :PT
C508 0.01 100V :PT
C507 0.0022 100V 5%:PT
C506 0.0033 100V 5%:PP
R511 12k :RN
C504 470p B
R512 120 1/4W :RF
D1002 1SS148 SW
C1002 10 50V
R508 6.8k 1/4W :FPRD
L495 25μH
C491 0.01 F
C492 220 25V
D528 1SS148 V. PULSE-SW
R844 1k
R808 22k
R838 270k 1/4W
Q525 DTC124ES H. FREQ-SW
R845 10k 1/4W
R1012 3.3 1W :RS
Q1005 2SA1220A-P CURR-BOOST1
D1012 GP08D PROTECT
C568 0.001 100V :PT
R588 10 1/4W :FPRD
C578 47 25V
C511 0.47 50V
R1017 2.2k
D1011 RD8. 2ESB2 VOLT-SHIFT
R803 47k 1/4W
D529 1SS148 V. PULSW
R880 1k
R1016 68 1/4W
R1015 470 1W :RS
C810 0.0033 100V :PT
R879 47k
R873 47k
Q1006 2SC2785 CURR-BOOST2
R1018 47k
Q520 DTA124ES V. PULSE-SW
Q502 2SC2688 H-DRIVE
R524 100k 1/4W
R509 3.3k :FPRD
C512 330p 500V B
R544 22k :RN
R527 1k
R820 5.6k
C581 100 25V
IC502 μPC4558C PIN-COM
PIN PHASE
RV504 1k-B
RV503 47k-B
R599 680 1/4W :FPRD
R545 1k
C542 10 50V
R536 22k
R537 1k :FPRD
R534 3.3k 1/4W
R535 6.8k :RN
H-SIZE
RV505 22k-B
PIN AMP
C543 4.7 50V
Q532 2SA1175 PIN-SW2
Q533 2SA1175 PIN-SW3
R800 8.2k :RN
R538 8.2k
R585 22k
R533 2.7k
R532 39k
C538 0.01 100V :PT
Q507 2SD1134C PIN-OUT
Q534 2SA1175 PIN-SW4
R586 15k :RN
RV510 47k-B
U/H-SIZE
D520 1SS148 U/S-SW
R576 82k
R834 4.7k
D527 1SS148 U/S-SW
R581 10k
R578 22k
Q512 2SA1175 PIN-SW1
R881 3.3k
R583 56k
Q516 2SA1175 U/H. SIZE-SW
Q508 2SC2785 V. ZOOMING
C539 0.01 100V :PT
R539 150k
C540 0.0015 100V :PT
R540 56k 1/4W
R580 22k
Q515 DTC124ES U/S-SW
R826 1k
R824 68k
R541 150k
R543 1M
R542 56k
C584 22 50V
Q550 2SC2785 V. ANG
C580 1 50V
RV550 4.7k-B
V-ANG
R827 1k
R825 47k
R821 120k
R501 680 1/4W :FPRD
D501 1SS148 SW
R503 82k
C502 4.7 50V
R502 18k 2W :RS
R504 3.9k
R505 82k
C503 4.7 50V
C522 820p 500V B
R513 1.5 :FPRD
D502 V-19E +24V-RECT
L503 18μH
C518 470 35V
L514 1mH
C579 47 25V
IC505 NJM7812B +12V-REG
+12V
+15V
E
C521 820p 500V B
D504 RGP15D +15V-RECT
D505 RGP15D +15V-RECT
R514 0.68 2W :RS
C519 220 25V
R510 2.2k 3W :RS
Q501 2SD1397 H-OUT
D507 ERC26-15S DAMPER
L504 0.7μH
C514 9800p 2kV :PP
C516 680p 2kV
C515 680p 2kV
T502
C513 0.033 630V :PP
C517 0.01 200V :PT
L505 0.7μH
D508 ERD28-08S PIN-DAMPER
D530 1SS83 PROTECT
D531 1SS148 PROTECT
L501 45μH
R515 1.8k 1W :RS
C520 33 160V :ALR
R519 150k 1/2W :RN
R857 10k 1/4W
R518 470k 1/4W :RN
D506 V11N
C523 4700p 2kV
900V
T501 FBT
NL501
HV
ABL
H1
H2
25V
15V
115V
170V
D503 V-19E +170V-RECT
170V
L502 47μH
C532 22 250V
H-CENT
C535 4.7 250V
R530 120 1W :RS
L506 3.9mH :LF-8L
D511 10E-2 H. CENT1
C533 1 200V :PT
RV502 120-B
R823 47 1/4W :FPRD
R840 47 1/4W
C583 22 50V
D512 10E-2 H. CENT2
C537 680p 500V B
L507 45μH
C534 0.22 200V :PT
R529 8.2 1W :RS
R531 2.2k 1/2W :FPRD
L508 :HLC
C536 1 200V :PT
L509 :PMC
L510 3.3mH
C541 4.7 50V :ALR
C570 10 50V
R853 560 1/4W
C571 22 25V
R850 82k
R851 68k
R852 47k
R855 560
RV509 220k-B
BOW
Q522 2SC2785 BOW
C572 1 50V
R584 120k
L513 10mH



W BOARD

IC NO	PIN NO	PAL	SECAM	NTSC 3.58	NTSC 4.43
IC1400	1	0.6	11.0	11.0	11.6
	3	8.3	2.2	2.2	8.4
	5	8.2	3.8-7.1		8.3
	7	10.9			10.9

Q NO.		PAL	SECAM	NTSC 3.58	NTSC 4.43
Q1400	B				
	C				
	E	6.0	6.0	6.1	
Q1401	B	5.4	10.9	10.9	5.4
	C	6.0	4.5-7.3	4.5-7.3	6.0
	E				
Q1403	B				
	C	7.0	6.8	5.9	5.3
	E				

Note :

- All capacitors are in μF unless otherwise noted. pF : μμF 50 WV or less are not indicated except for electrolytics.
- Indication of resistance, which does not have one for rating electrical power, is as follows.

Pitch : 5 mm Rating electrical power 1/4W

- All resistors are in ohms.
- : nonflammable resistor.
- : fusible resistor.
- △ : internal component.
- : panel designation and adjustment for repair.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- When replacing the part in below table be sure to perform the related adjustment.

Part replaced	Adjustment (※)
IC501, Q503, Q504, Q505, Q506, D509, D510, C505, C520, C524, C525, C526, C527, C528, C529, C530, C531, R500, R506, R516, R517, R518, R519, R520, R521, R522, R523, R524, R525, R526, R528, R804, NL501, HVR	R500 (HOLD-DOWN)

- All voltages are in V.
- Voltage are dc with respect to ground unless otherwise noted.
- Readings are taken with a color-bar signal input.
- Readings are taken with a PAL color-bar signal input.
- Voltage variations may be noted due to normal production tolerance.
- : B+ bus.
- : B− bus.
- : signal path.
- No mark : with PAL color-bar signal received or common voltage.
- ( ) : with SECAM color-bar signal received.
- < > : with NTSC 3.58 color-bar signal received.
- (( )) : with NTSC 4.43 color-bar signal received.
- [ ] : with S (Y/C) color-bar signal received.
- { } : with disital (9 pin in) color-bar signal received.
- ※ : measurement impossibility.

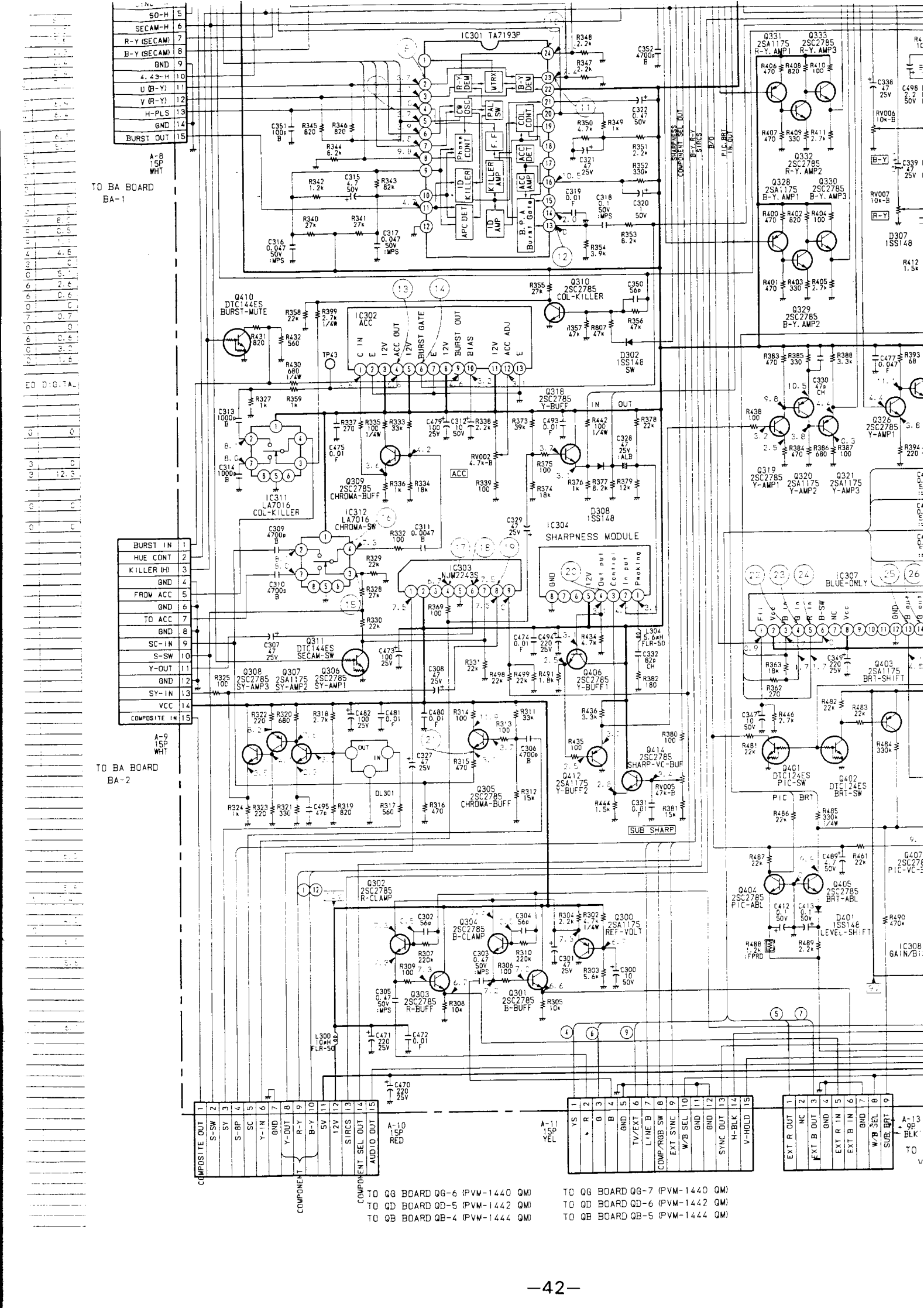
Reference information

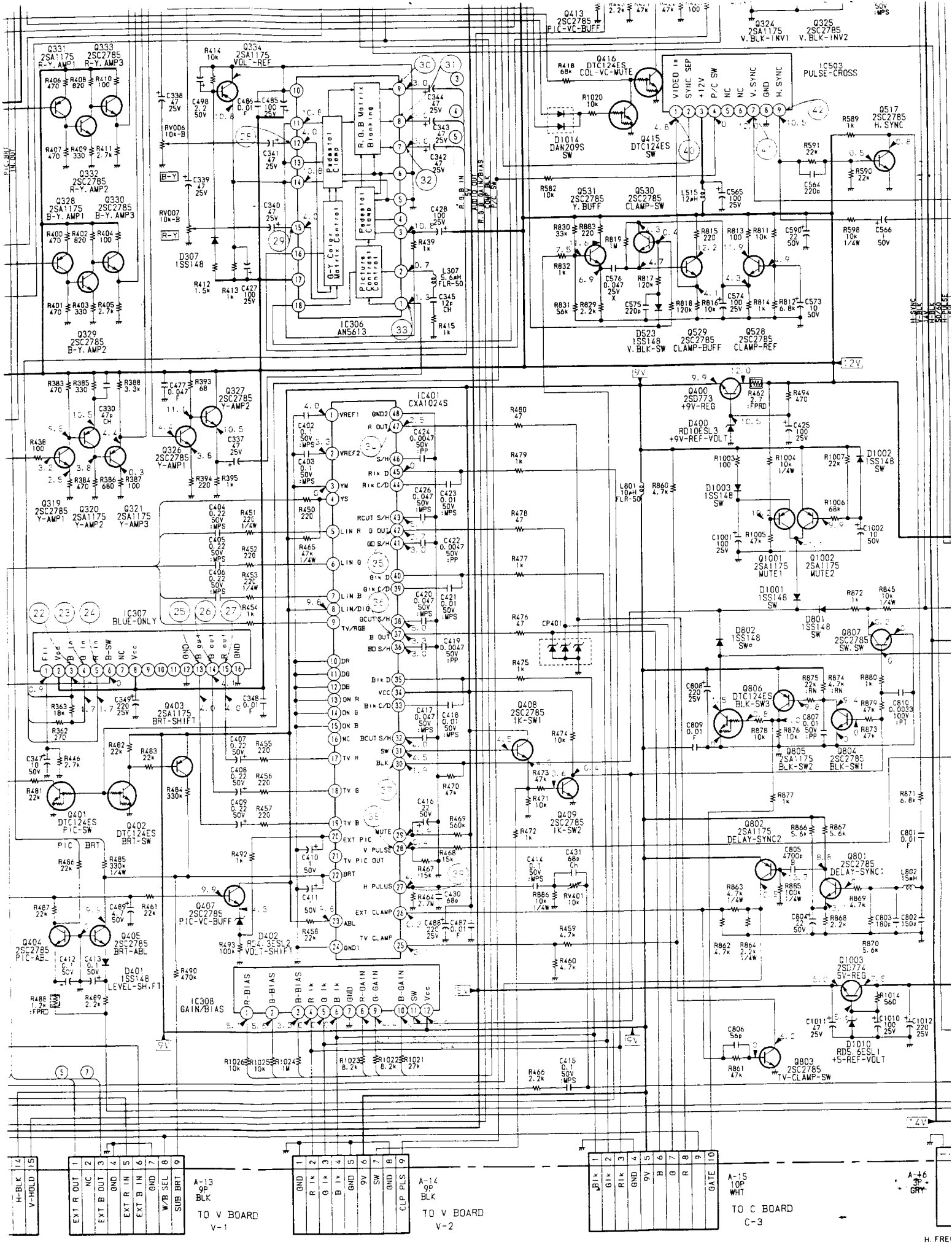
RESISTOR	: RN	METAL FILM
	: RC	SOLID
	: FPRD	NONFLAMMABLE CARBON
	: FUSE	NONFLAMMABLE FUSIBLE
	: RS	NONFLAMMABLE WIREWOUND
	: RB	NONFLAMMABLE CEMENT
COIL	: LF-8L	MICRO INDUCTOR
CAPACITOR	: TA	TANTALUM
	: PS	STYROL
	: PP	POLYPROPYLENE
	: PT	MYLAR
	: MPS	METALIZED POLYESTER
	: MPP	METALIZED POLYPROPYLENE
	: ALB	BIPOLAR
	: ALT	HIGH TEMPERATURE
	: ALR	HIGH RIPPLE

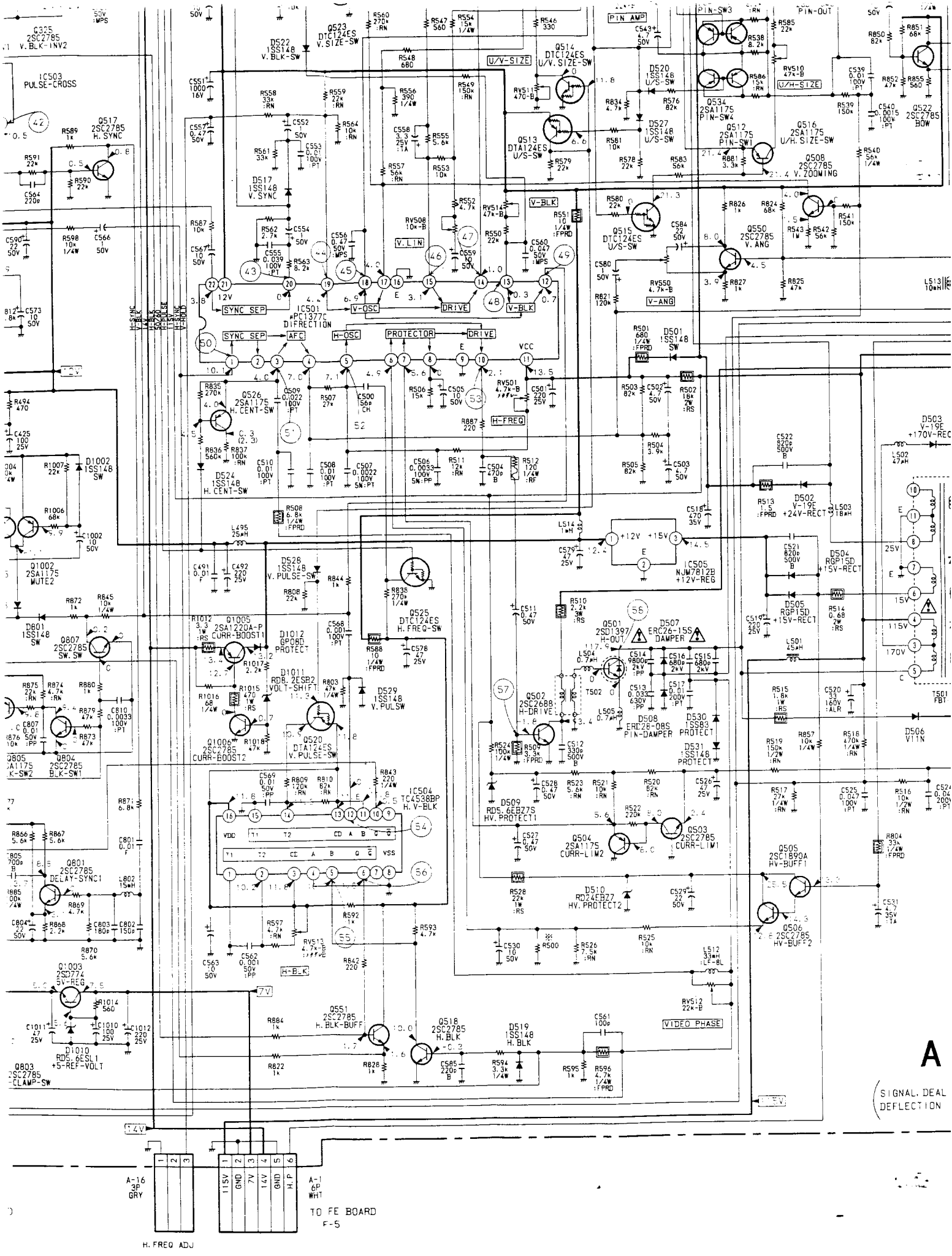
Note: The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

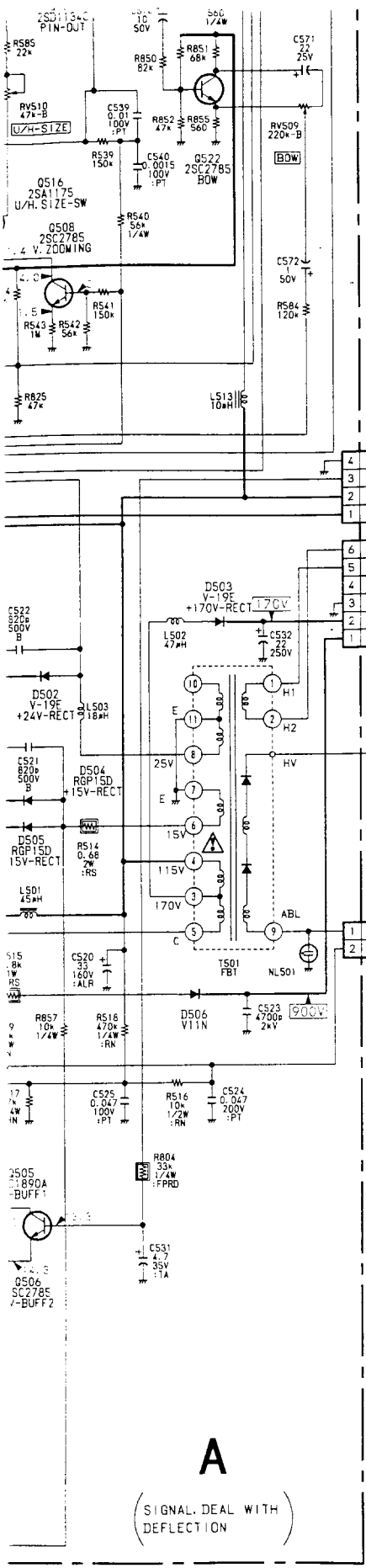
IC301	(1)	8.4	8.4	8.4	8.4	8.4	8.4
	(2)	4.8	4.8	4.8	4.8	4.8	4.8
IC302	(1)					1.4	1.4
IC303	(1)	0	0	0	3.8	0	0
IC304	(1)	0	2.8	2.8	2.8	2.8	2.8
IC305	(1)	7.0	10.2	7.0	7.0	7.0	7.0
	(2)	8.4	9.1	8.4	8.4		
	(3)	6.9	10.2	6.9	6.9	6.9	6.9
	(4)	6.3	9.0	6.4	6.4	6.4	6.4
	(5)(10)	6.8	10.0	6.8	6.8		
IC306	(1)	7.9	9.5	8.4	8.4	8.4	8.4
	(2)	6.4	7.3	6.9	6.9	6.9	6.9
IC309	(1)	1.1	1.7	3.0	1.8	1.5	
	(2)	9.1	12.5	9.1	9.1	9.1	
	(3)	9.1	8.9	9.1	9.1	9.1	
	(4)	12.3	0.1	12.3	12.3	12.3	
	(10)	9.1	10.5	9.1			
IC311	(2)	4.3	0	4.3	4.3	4.3	0
	(4)	7.3	7.5	7.3	7.3	7.3	8.0
IC312	(3)	0	0	0	0	4.9	0.5
IC401	(4)	2.8	0.9	0.9	0.9	0.9	1.1
	(5)(6)(7)	0.9	4.4	4.4	4.4	4.4	4.8
	(9)	4.4	5.3	5.3	5.3	5.3	0
	(17)(18)(19)	5.3	6.0	6.0	6.0	6.0	5.1
	(28)	6.0	5.7	5.6	3.6	2.6	2.6
	(33)	4.3	1.0	1.2	0.8	0.6	0.6
	(35)	0.7	0.2	0.3	0	0	0
	(39)	0.4	0.8	1.1	0.7	0.7	0.7
	(42)	0.5	0.2	0.3	0	0	0
	(44)	0.3	1.0	0.7	0.6	0.6	0.6
	(46)	0.5	3.1	3.2	3.1	3.0	3.0
IC503	(2)	2.9	1.0	1.0	1.0	1.0	1.6

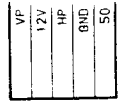
Q NO.		PAL	SECAM	NTSC 3.58	NTSC 4.43	S-VIDEO	DIGITAL
Q310	B	4.3	0	4.3	4.3		
	C	0.2	0	0.2	0.2		
	E						
Q316	B	0	0.2	0.3	0	0	0
	C						
	E						
Q317	B	0	1.7	0.3	0	0.3	0
	C	12.3	0.1	12.3	12.3	12.3	12.3
	E						
Q322	B						
	C	0	0.2	0.3	0	0	0
	E						
Q323	B	0	0.2	0.3	0	0	0
	C						
	E						
Q328	B	9.1	10.5	9.1	9.1		
	C	2.5	1.2	2.5	2.5		
	E	9.8	11.0	9.8	9.8		
Q329	B	2.5	1.2	2.5	2.5		
	C	7.6	12.8	7.6	7.6		
	E	1.9	0.6	1.9	1.9		
Q330	B	7.6	10.8	7.6	7.6		
	C	12.1	11.9	12.1	12.1		
	E	7.0	10.2	7.0	7.0		
Q331	B	9.1	10.5	9.1	9.1		
	C	2.6	1.2	2.6	2.6		
	E	9.8	11.1	9.8	9.8		
Q332	B	2.6	1.2	2.6	2.6		
	C	7.5	13.5	9.1	9.1		
	E	1.9	0.7	1.9	1.9		
Q333	B	2.5	10.6	2.5	2.5		
	C	12.1	11.9	12.1	12.1		
	E	6.9	10.4	6.9	7.0		
Q335	B	6.8	6.2	6.4	6.4		
	C						
	E	7.4	6.6	6.9	6.9		
Q336	B	9.3	9.5	9.3	9.7		
	C						
	E	9.6	10.2	10.4	9.6		
Q337	B	7.0	6.8	7.0	6.9		
	C						
	E	6.4	6.3	6.4	6.3		
Q401	B						
	C	7.9	12.5	8.1	8.1		7.2
	E						
Q404	B						
	C	7.6	12.1	8.0	8.0		7.5
	E	0.3	0.4	0.4	0.4		0.4
Q405	B						
	C	4.2	4.1	4.3	4.3		4.2
	E	0.3	0.4	0.4	0		
Q407	B	7.9	12.5	8.1	8.1		7.2
	C						
	E	7.3	12.1	7.7	7.7		6.8
Q411	B						
	C	0.5	0.2	0.3	0.3		
	E						
Q413	B	6.6	10.6	10.4	6.6		
	C						
	E	7.3	12.5	8.1	8.1		7.2
Q415	B						
	C	0.3	0.4	0.4	0.4		
	E						
Q416	B	0.3	0.2	0.3	0.3		
	C	7.6	12.6	8.0	8.0		
	E						
Q507	B						
	C	12.3	0.1	12.3	12.3		
	E						
Q516	B						
	C	5.1	4.8	5.2	5.2		
	E						
Q532	B	0.4	0.2	0.3	0.3		
	C	0.2	0.2	0.3	0.3		
	E	0.8	0.6	0.8	0.8		
Q534	B						
	C	0.2	0.2	0.3	0.3		
	E						

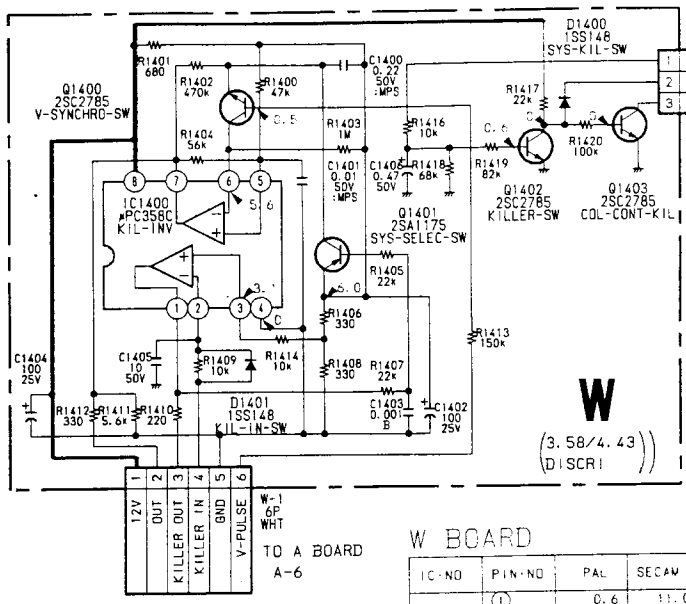

50-H 5
SECAM-H 6
R-Y (SECAM) 7
B-Y (SECAM) 8
GND 9
4.43-H 10
U (B-Y) 11
V (R-Y) 12
H-PLS 13
GND 14
BURST OUT 15
A-8 15P WHT
TO BA BOARD BA-1
IC301 TA7193P
IC302 ACC
IC303 NJW2243S
IC304 SHARPNESS MODULE
IC307 BLUE-ONLY
IC308 GAIN/BI
IC311 LA7016 COL-KILLER
IC312 LA7016 CHROMA-SW
Q301 2SC2785 B-BUFF
Q302 2SC2785 R-CLAMP
Q303 2SC2785 R-BUFF
Q304 2SC2785 B-CLAMP
Q305 2SC2785 CHROMA-BUFF
Q306 2SC2785 SY-AMP1
Q307 2SA1175 SY-AMP2
Q308 2SC2785 SY-AMP3
Q309 2SC2785 CHROMA-BUFF
Q310 2SC2785 COL-KILLER
Q311 DTC144ES SECAM-SW
Q318 2SC2785 Y-BUFF
Q319 2SC2785 Y-AMP1
Q320 2SA1175 Y-AMP2
Q321 2SA1175 Y-AMP3
Q326 2SC2785 Y-AMP1
Q328 2SA1175 B-Y AMP1
Q329 2SC2785 B-Y. AMP2
Q330 2SC2785 B-Y. AMP3
Q331 2SA1175 R-Y. AMP1
Q332 2SC2785 R-Y. AMP2
Q333 2SC2785 R-Y. AMP3
Q401 DTC124ES PIC-SW
Q402 DTC124ES BRT-SW
Q403 2SA1175 BRT-SHIFT
Q404 2SC2785 PIC-ABL
Q405 2SC2785 BRT-ABL
Q406 2SC2785 Y-BUFF
Q407 2SC278 PIC-VC-S
Q410 DTC144ES BURST-MUTE
Q412 2SA1175 Y-BUFF2
Q414 2SC2785 SHARP-VC-BUF
D301 1SS148 R-CLAMP
D302 1SS148 SW
D307 1SS148
D308 1SS148
D401 1SS148 LEVEL-SHIFT
DL301
L300 10mH FLR-50
L304 5.6mH FLR-50
BURST IN 1
HUE CONT 2
KILLER (H) 3
GND 4
FROM ACC 5
GND 6
TO ACC 7
GND 8
SC-IN 9
S-SW 10
Y-OUT 11
GND 12
SY-IN 13
VCC 14
COMPOSITE IN 15
A-9 15P WHT
TO BA BOARD BA-2
COMPOSITE OUT 1
S-SW 2
SY 3
S-BP 4
SC 5
Y-IN 6
GND 7
Y-OUT 8
R-Y 9
B-Y 10
5V 11
12V 12
SIRCS 13
COMPONENT SEL OUT 14
AUDIO OUT 15
A-10 15P RED
COMPONENT
COMPONENT SEL OUT
YS 1
R 2
B 3
B 4
GND 5
TV/EXT 6
LINE B 7
COMP/RGB SW 8
EXT SYNC 9
W/B SEL 10
GND 11
GND 12
SYNC OUT 13
H-BLK 14
V-HOLD 15
A-11 15P YEL
EXT R OUT 1
NC 2
EXT B OUT 3
GND 4
EXT R IN 5
EXT B IN 6
GND 7
W/B SEL 8
SUB BRT 9
A-13 9P BLK
TO QG BOARD QG-6 (PVM-1440 QM)
TO QD BOARD QD-5 (PVM-1442 QM)
TO QB BOARD QB-4 (PVM-1444 QM)
TO QG BOARD QG-7 (PVM-1440 QM)
TO QD BOARD QD-6 (PVM-1442 QM)
TO QB BOARD QB-5 (PVM-1444 QM)
SUB SHARP
PIC BRT


IC306 AN5613
IC307 BLUE-ONLY
IC308 GAIN/BIAS
IC401 CXA1024S
IC503 PULSE-CROSS
Q331 2SA1175 R-Y. AMP1
Q333 2SC2785 R-Y. AMP3
Q332 2SC2785 R-Y. AMP2
Q328 2SA1175 B-Y. AMP1
Q330 2SC2785 B-Y. AMP3
Q329 2SC2785 B-Y. AMP2
Q334 2SA1175 VOL-REF
Q319 2SC2785 Y-AMP1
Q320 2SA1175 Y-AMP2
Q321 2SA1175 Y-AMP3
Q326 2SC2785 Y-AMP1
Q327 2SC2785 Y-AMP2
Q401 DTC124ES PIC-SW
Q402 DTC124ES BRT-SW
Q403 2SA1175 BRT-SHIFT
Q404 2SC2785 PIC-ABL
Q405 2SC2785 BRT-ABL
Q407 2SC2785 PIC-VC-BUFF
Q408 2SC2785 1K-SW1
Q409 2SC2785 1K-SW2
Q413 2SC2785 PIC-VC-BUFF
Q415 DTC124ES SW
Q416 DTC124ES COL-VC-MUTE
Q324 2SA1175 V. BLK-INV1
Q325 2SC2785 V. BLK-INV2
Q517 2SC2785 H. SYNC
Q530 2SC2785 CLAMP-SW
Q531 2SC2785 Y. BUFF
Q529 2SC2785 CLAMP-BUFF
Q528 2SC2785 CLAMP-REF
Q400 2SD773 +9V-REG
Q1001 2SA1175 MUTE1
Q1002 2SA1175 MUTE2
Q801 2SC2785 DELAY-SYNC1
Q802 2SA1175 DELAY-SYNC2
Q803 2SC2785 TV-CLAMP-SW
Q804 2SC2785 BLK-SW1
Q805 2SA1175 BLK-SW2
Q806 DTC124ES BLK-SW3
Q807 2SC2785 SW. SW
Q1003 2SD774 5V-REG
D307 1SS148
D401 1SS148 LEVEL-SHIFT
D402 RD4.3ESL2 VOLT-SHIFT
D523 1SS148 V. BLK-SW
D400 RD10ESL3 +9V-REF-VOLT
D1010 RD5.6ESL1 +5-REF-VOLT
D1014 DAN209S SW
D1001 1SS148 SW
D1002 1SS148 SW
D1003 1SS148 SW
D801 1SS148 SW
D802 1SS148 SW
CP401
L307 5.6mH FLR-50
L515 12mH
L801 10mH FLR-50
L802 15mH
RV006 10k-B
RV007 10k-B
RV401 10k
H-BLK
V-HOLD
EXT R OUT
EXT B OUT
EXT R IN
EXT B IN
W/B SEL
SUB BRT
A-13 9P BLK
TO V BOARD V-1
A-14 9P BLK
TO V BOARD V-2
A-15 10P WHT
TO C BOARD C-3
A-16 3P GRY
+12V
+9V
+5V


IC501 μPC1377C DIFFRECTION
SYNC SEP
AFC
H-OSC
PROTECTOR
DRIVE
V-OSC
V-BLK
V-LIN
VCC
IC503 PULSE-CROSS
IC504 TC4538BP H. V-BLK
IC505 NJM7812B +12V-REG
Q501 2SD1397 H-OUT
Q502 2SC2688 H-DRIVE
Q503 2SC2785 CURR-LIM1
Q504 2SA1175 CURR-LIM2
Q505 2SC1890A HV-BUFF1
Q506 2SC2785 HV-BUFF2
Q507 ERC26-15S DAMPER
Q508 2SC2785 V. ZOOMING
Q512 2SA1175 PIN-SW1
Q513 DTA124ES U/S-SW
Q514 DTC124ES U/V. SIZE-SW
Q515 DTC124ES U/S-SW
Q516 2SA1175 U/H. SIZE-SW
Q517 2SC2785 H. SYNC
Q518 2SC2785 H. BLK
Q520 DTA124ES V. PULSE-SW
Q522 2SC2785 BOW
Q523 DTC124ES V. SIZE-SW
Q525 DTC124ES H. FREQ-SW
Q526 2SA1175 H. CENT-SW
Q534 2SA1175 PIN-SW4
Q550 2SC2785 V. ANG
Q551 2SC2785 H. BLK-BUFF
D501 1SS148 SW
D502 V-19E +24V-RECT
D503 V-19E +170V-REC
D504 RGP15D +15V-RECT
D505 RGP15D +15V-RECT
D506 V11N
D507 ERC26-15S DAMPER
D508 ERD28-08S PIN-DAMPER
D509 RDS. 6EBZ7S HV. PROTECT1
D510 RD24EBZ7 HV. PROTECT2
D517 1SS148 V. SYNC
D518 1SS148 H. CENT-SW
D519 1SS148 H. BLK
D520 1SS148 U/S-SW
D522 1SS148 V. BLK-SW
D524 1SS148 H. CENT-SW
D526 1SS148 V. PULSE-SW
D527 1SS148 U/S-SW
D529 1SS148 V. PULSW
D530 1SS83 PROTECT
D531 1SS148 PROTECT
D601 1SS148 SW
D1002 1SS148 SW
D1010 RDS. 6ESL1 +5-REF-VOLT
D1011 RDS. 2ESP2 VOLT-SHIFT
D1012 GP08D PROTECT
PIN AMP
PIN-SW3
PIN-OUT
U/V-SIZE
U/H-SIZE
V-BLK
V-ANG
VIDEO PHASE
+12V
+15V
+7V
+14V
+5V
-7V
H-BLK
H-FREQ
TO FE BOARD
F-5
H. FREQ ADJ
A-16 3P GRY
A-1 6P WHT
115V
GND
7V
14V
GND
H.P
A
SIGNAL, DEAL
DEFLECTION



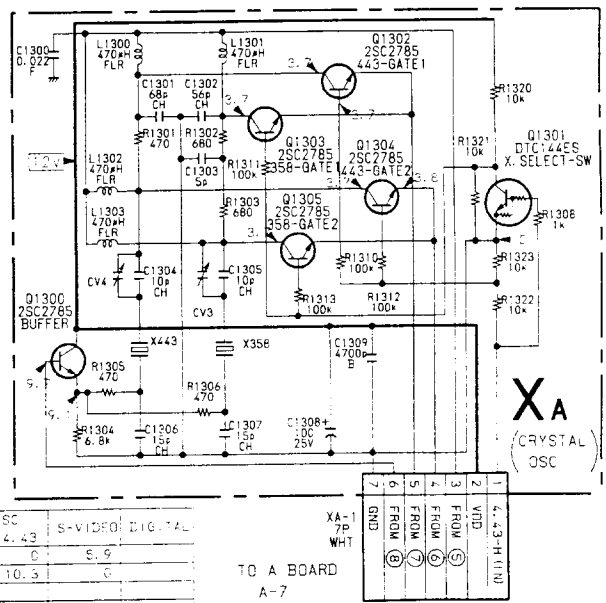




W BOARD

IC NO	PIN NO	PAL	SECAM	NTSC 3.58	NTSC 4.43
IC1400	(1)	0.6	11.0	11.0	0.6
	(2)	8.3	2.2	2.2	8.4
	(5)	6.2	3.8-7.1		8.3
	(7)	10.9			10.9

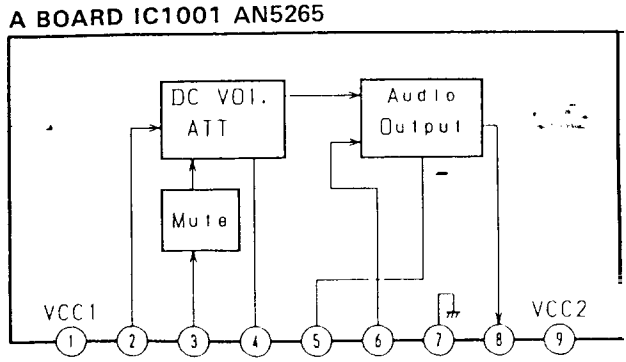
Q NO.		PAL	SECAM	NTSC 3.58	NTSC 4.43
Q1400	B				
	C				
	E	6.0	6.0	6.1	
Q1401	B	5.4	10.9	10.9	5.4
	C	6.0	4.5-7.3	4.5-7.3	6.0
	E				
Q1403	B				
	C	7.0	6.8	5.9	5.8
	E				

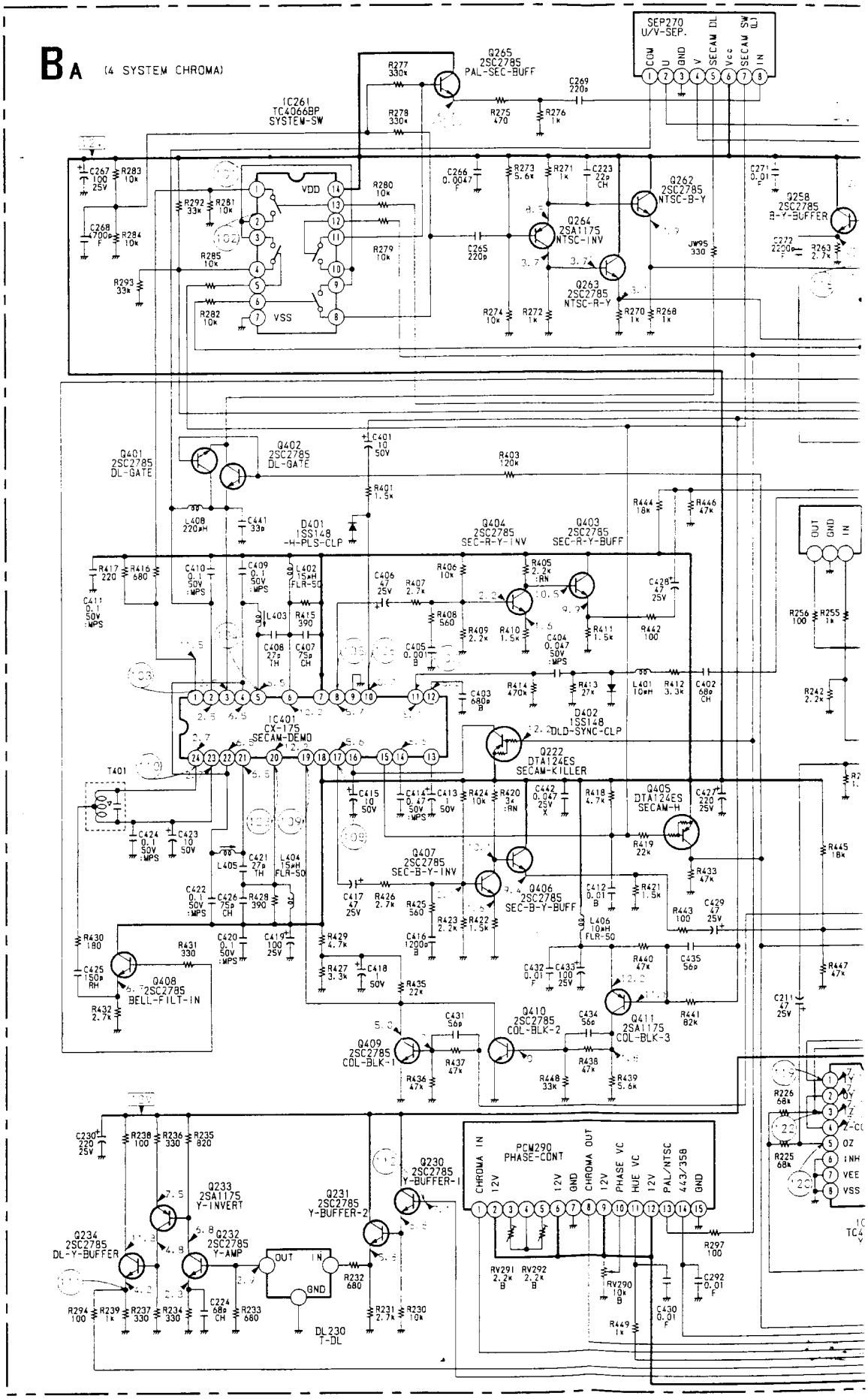


XA BOARD

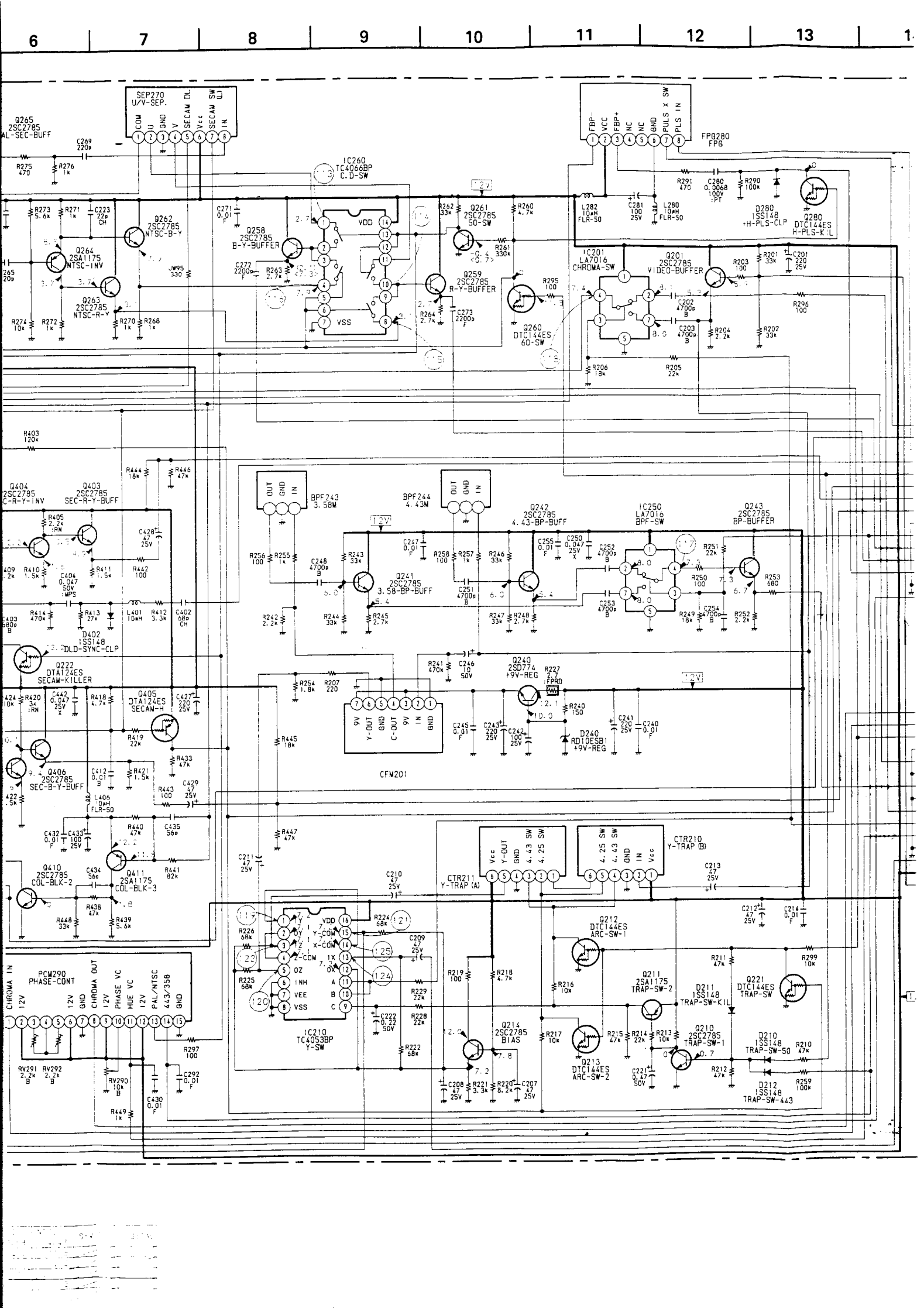
Q NO.		PAL	SECAM	NTSC 3.58	NTSC 4.43	S-VIDEO	DIGITAL
Q1301	B	0			0	5.9	
	C	10.3			10.3	0	
	E						
Q1302	B	4.2			4.2	4.2	
	C						
	E						
Q1304	B	4.1			3.9	0	
	C						
	E						
Q1305	B	0			0	4.2	
	C						
	E						

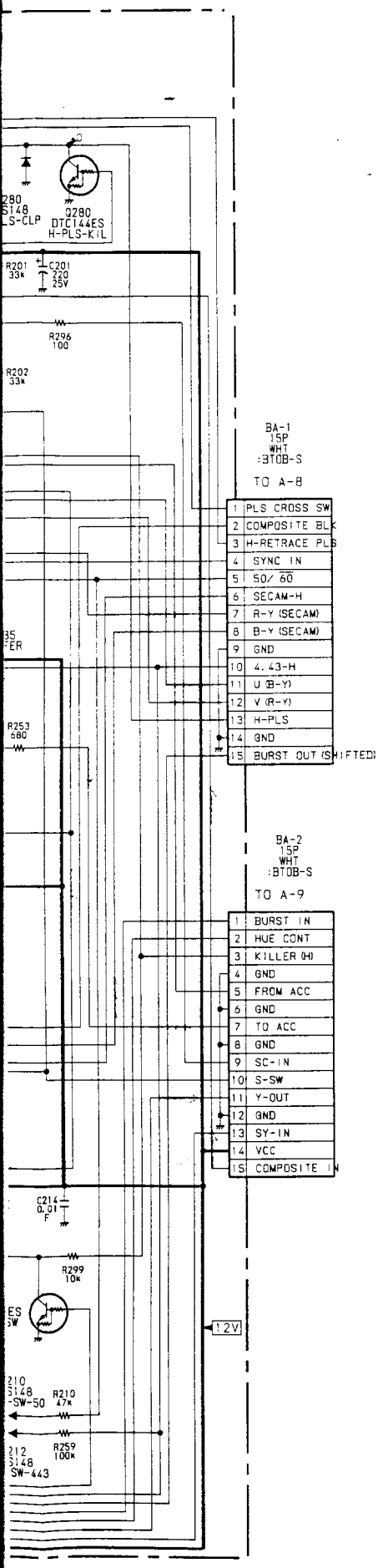
A BOARD IC1001 AN5265



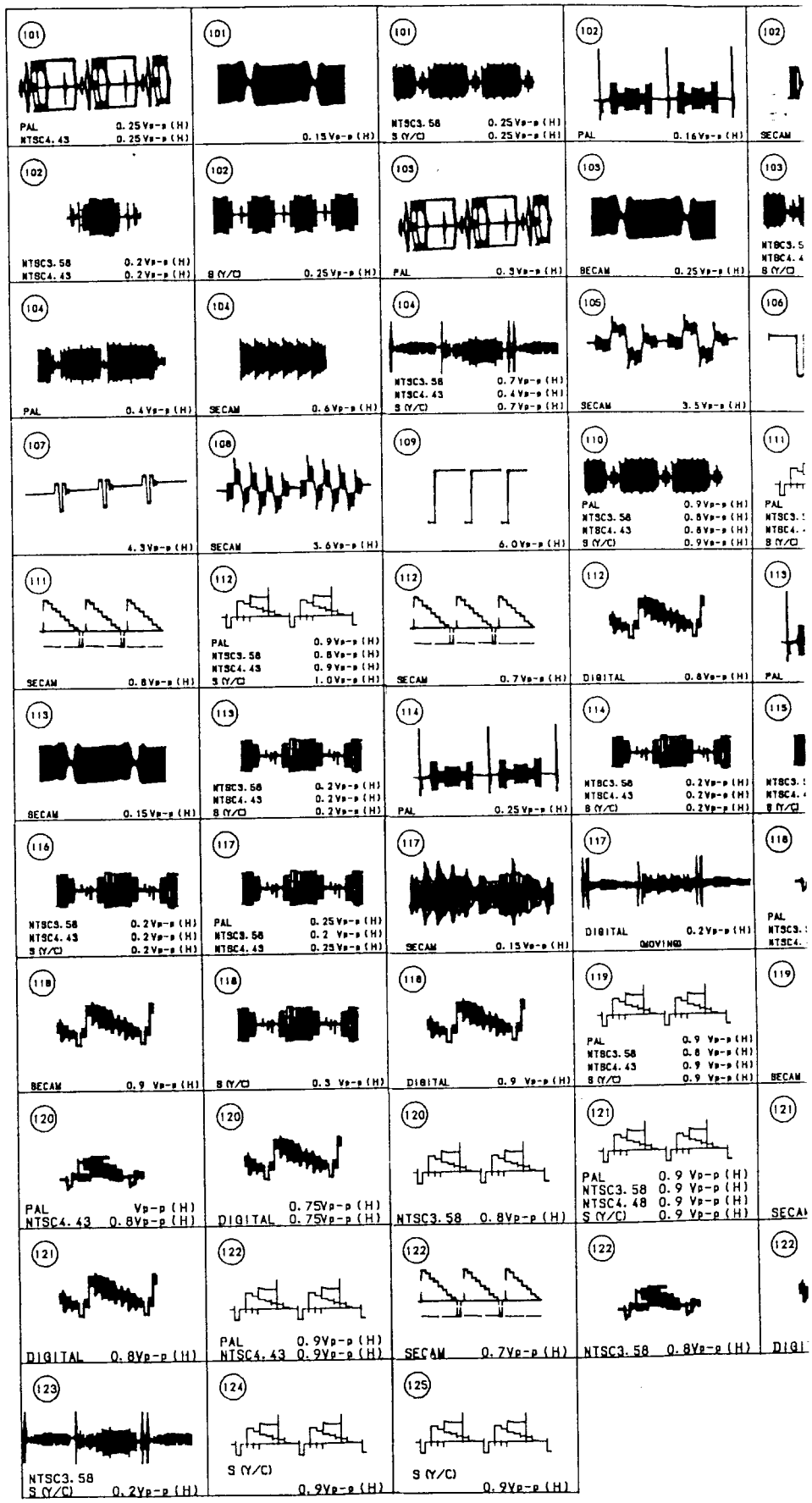

BA (4 SYSTEM CHROMA)
SEP270
U/V-SEP.
COM
U
GND
V
SECAM DL
Vcc
SECAM SW (L)
IN
IC261
TC4066BP
SYSTEM-SW
VDD
VSS
Q265
2SC2785
PAL-SEC-BUFF
Q262
2SC2785
NTSC-B-Y
Q264
2SA1175
NTSC-INV
Q263
2SC2785
NTSC-R-Y
Q258
2SC2785
B-Y-BUFFER
Q401
2SC2785
DL-GATE
Q402
2SC2785
DL-GATE
D401
1SS148
-H-PLS-CLP
Q404
2SC2785
SEC-R-Y-INV
Q403
2SC2785
SEC-R-Y-BUFF
OUT
GND
IN
IC401
CX-175
SECAM-DEMO
D402
1SS148
DLD-SYNC-CLP
Q222
DTA124ES
SECAM-KILLER
Q405
DTA124ES
SECAM-H
Q407
2SC2785
SEC-B-Y-INV
Q406
2SC2785
SEC-B-Y-BUFF
Q408
2SC2785
BELL-FILT-IN
Q409
2SC2785
COL-BLK-1
Q410
2SC2785
COL-BLK-2
Q411
2SA1175
COL-BLK-3
Q230
2SC2785
Y-BUFFER-1
Q231
2SC2785
Y-BUFFER-2
Q232
2SC2785
Y-AMP
Q233
2SA1175
Y-INVERT
Q234
2SC2785
DL-Y-BUFFER
DL230
T-DL
PCM290
PHASE-CONT
CHROMA IN
12V
12V
GND
CHROMA OUT
12V
PHASE VC
HUE VC
12V
PAL/NTSC
443/358
GND
OZ
INH
VEE
VSS

BA BOARD

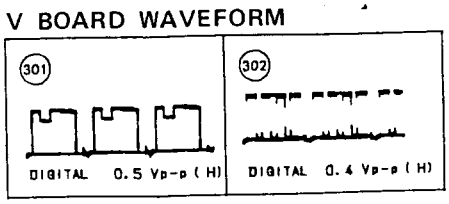

6
7
8
9
10
11
12
13
SEP270
U/V-SEP.
COM
U
GND
V
SECAM DL
Vcc
SECAM SW (L)
IN
Q265
2SC2785
AL-SEC-BUFF
IC260
TC4066BP
C.D-SW
FPG280
FPG
FBP-
VCC
FBP+
NC
NC
GND
PULS X SW
PLS IN
Q262
2SC2785
NTSC-B-Y
Q264
2SA1175
NTSC-INV
Q263
2SC2785
NTSC-R-Y
Q258
2SC2785
B-Y-BUFFER
Q259
2SC2785
R-Y-BUFFER
Q261
2SC2785
50-SW
Q260
DTC144ES
60-SW
VDD
VSS
IC201
LA7016
CHROMA-SW
Q201
2SC2785
VIDEO-BUFFER
L282
10uH
FLR-50
L280
10uH
FLR-50
D280
1SS148
+H-PLS-CLP
Q280
DTC144ES
H-PLS-KIL
Q404
2SC2785
C-R-Y-INV
Q403
2SC2785
SEC-R-Y-BUFF
D402
1SS148
DLD-SYNC-CLP
Q222
DTA124ES
SECAM-KILLER
Q405
DTA124ES
SECAM-H
Q406
2SC2785
SEC-B-Y-BUFF
Q410
2SC2785
COL-BLK-2
Q411
2SA1175
COL-BLK-3
L406
10uH
FLR-50
BPF243
3.58M
BPF244
4.43M
OUT
GND
IN
Q241
2SC2785
3.58-BP-BUFF
Q242
2SC2785
4.43-BP-BUFF
IC250
LA7016
BPF-SW
Q243
2SC2785
BP-BUFFER
CFM201
9V
Y-OUT
GND
C-OUT
9V
IN
GND
Q240
2SD774
+9V-REG
D240
RD10ESB1
+9V-REG
CTR211
Y-TRAP (A)
CTR210
Y-TRAP (B)
Vcc
Y-OUT
GND
4.43 SW
4.25 SW
4.25 SW
4.43 SW
GND
IN
Vcc
IC210
TC4053BP
Y-SW
VDD
X-COM
Y-COM
Z-COM
OZ
INH
VEE
VSS
1X
0X
A
B
C
Q212
DTC144ES
ARC-SW-1
Q213
DTC144ES
ARC-SW-2
Q214
2SC2785
BIAS
Q211
2SA1175
TRAP-SW-2
Q210
2SC2785
TRAP-SW-1
Q221
DTC144ES
TRAP-SW
D211
1SS148
TRAP-SW-KIL
D210
1SS148
TRAP-SW-50
D212
1SS148
TRAP-SW-443
PCM290
PHASE-CONT
CHROMA IN
12V
12V
GND
CHROMA OUT
12V
PHASE VC
HUE VC
12V
PAL/NTSC
443/358
GND
RV291
2.2k
B
RV292
2.2k
B
RV290
10k
B

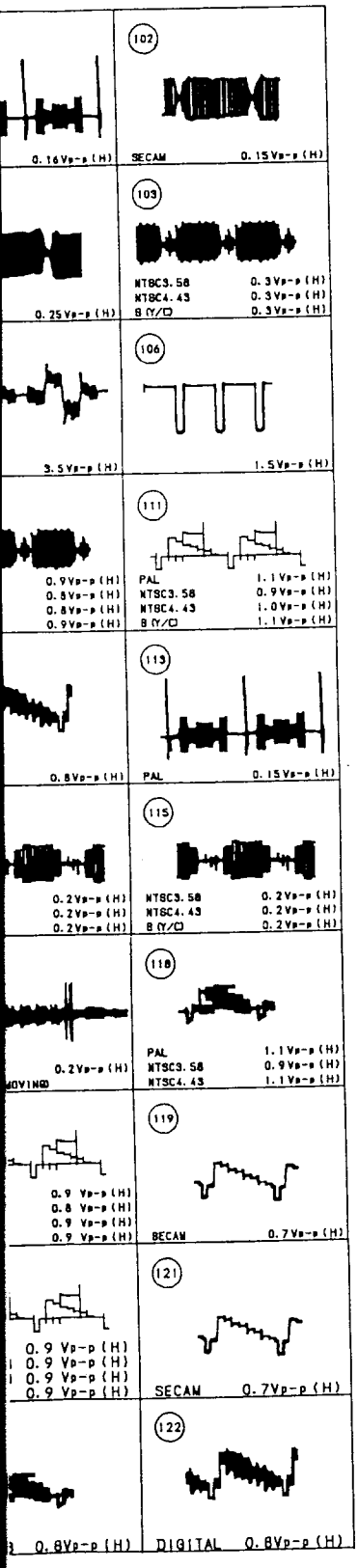


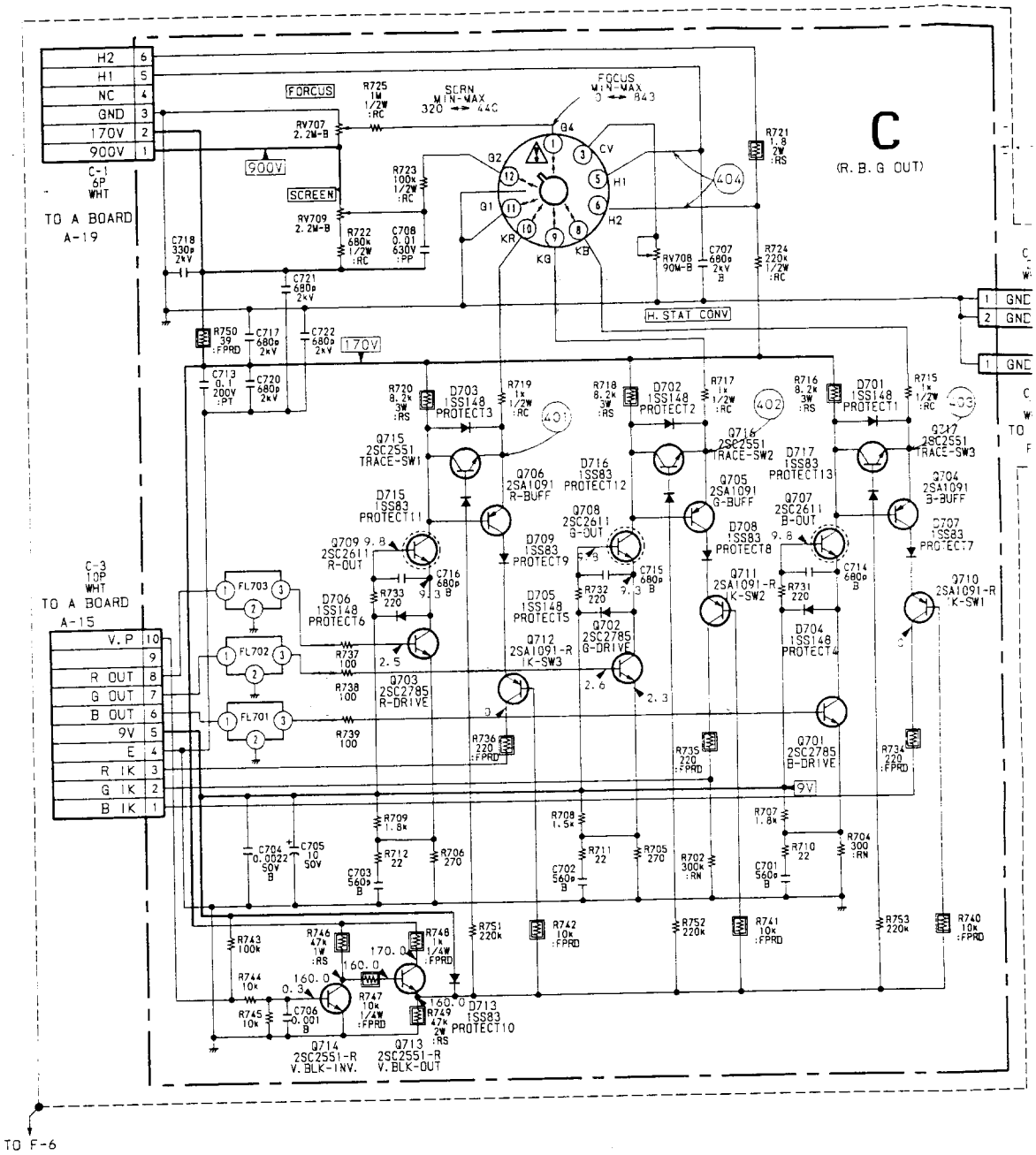
BA BOARD WAVEFORM

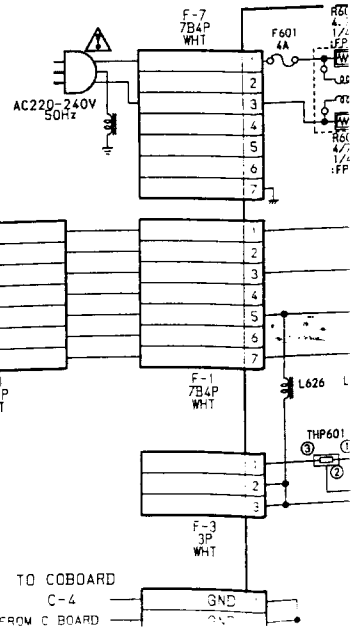


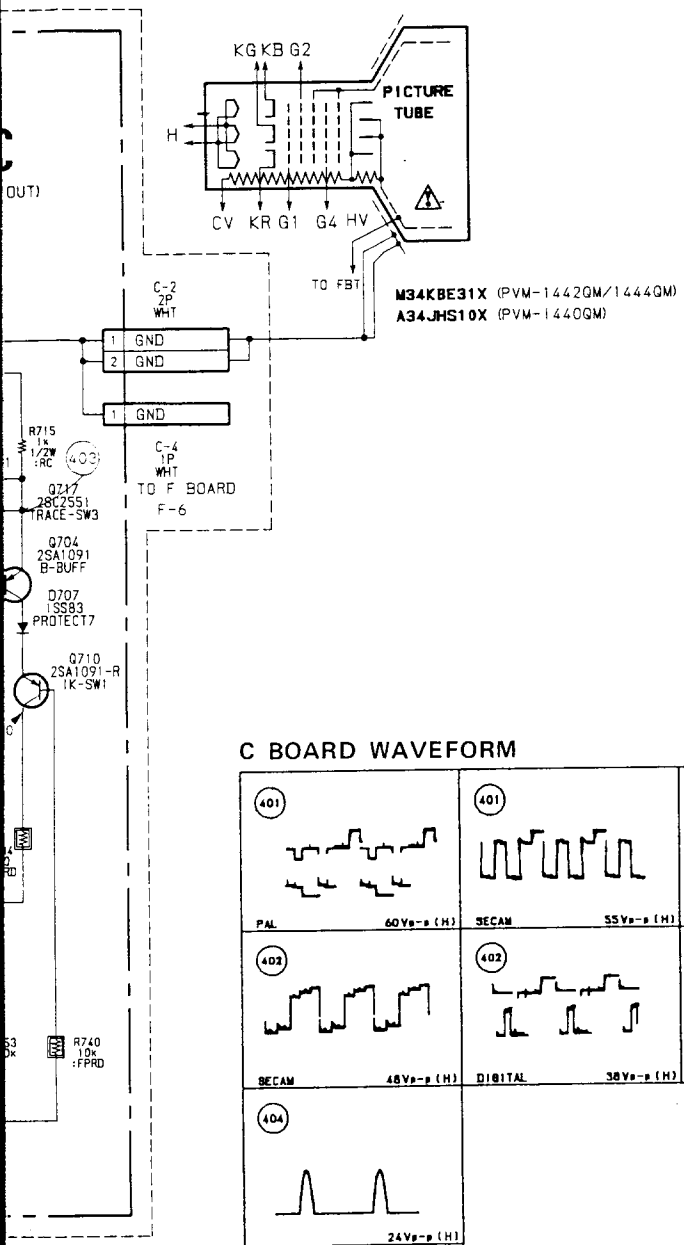
V BOARD WAVEFORM

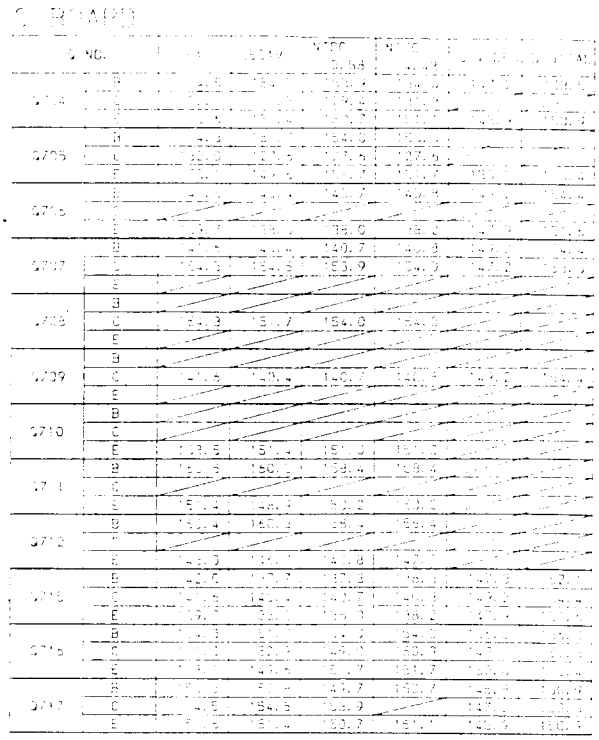



0.16Vp-p (H)
102
SECAM 0.15Vp-p (H)
0.25Vp-p (H)
103
NTSC3.58 0.3Vp-p (H)
NTSC4.43 0.3Vp-p (H)
B (Y/C) 0.3Vp-p (H)
3.5Vp-p (H)
106
1.5Vp-p (H)
0.9Vp-p (H)
0.8Vp-p (H)
0.8Vp-p (H)
0.9Vp-p (H)
111
PAL 1.1Vp-p (H)
NTSC3.58 0.9Vp-p (H)
NTSC4.43 1.0Vp-p (H)
B (Y/C) 1.1Vp-p (H)
0.8Vp-p (H)
113
PAL 0.15Vp-p (H)
0.2Vp-p (H)
0.2Vp-p (H)
0.2Vp-p (H)
115
NTSC3.58 0.2Vp-p (H)
NTSC4.43 0.2Vp-p (H)
B (Y/C) 0.2Vp-p (H)
0.2Vp-p (H)
118
PAL 1.1Vp-p (H)
NTSC3.58 0.9Vp-p (H)
NTSC4.43 1.1Vp-p (H)
0.9 Vp-p (H)
0.8 Vp-p (H)
0.9 Vp-p (H)
0.9 Vp-p (H)
119
SECAM 0.7Vp-p (H)
0.9 Vp-p (H)
0.9 Vp-p (H)
0.9 Vp-p (H)
0.9 Vp-p (H)
121
SECAM 0.7Vp-p (H)
0.8Vp-p (H)
122
DIGITAL 0.8Vp-p (H)

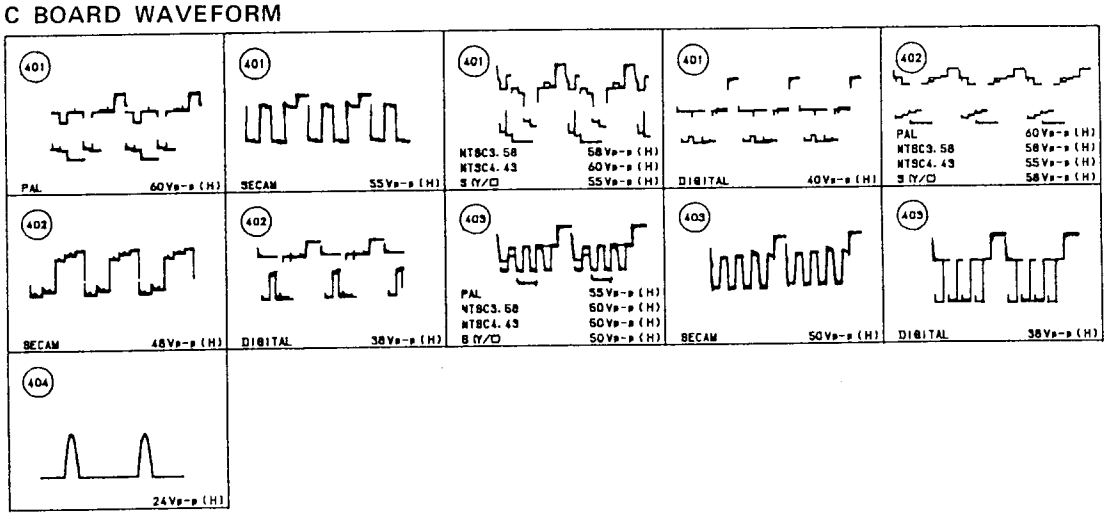

C
(R. B. G OUT)
H2 6
H1 5
NC 4
GND 3
170V 2
900V 1
C-1
6P
WHT
TO A BOARD
A-19
FOCUS
SCRN
MIN-MAX
320 ↔ 440
FOCUS
MIN-MAX
0 ↔ 843
900V
SCREEN
H. STAT CONV
170V
GND
GND
GND
TO
C-3
10P
WHT
TO A BOARD
A-15
V. P 10
9
R OUT 8
G OUT 7
B OUT 6
9V 5
E 4
R IK 3
G IK 2
B IK 1
Q715 2SC2551 TRACE-SW1
Q716 2SC2551 TRACE-SW2
Q717 2SC2551 TRACE-SW3
Q706 2SA1091 R-BUFF
Q705 2SA1091 G-BUFF
Q704 2SA1091 B-BUFF
Q707 2SC2611 B-OUT
Q709 2SC2611 R-OUT
Q708 2SC2611 G-OUT
Q711 2SA1091-R K-SW2
Q710 2SA1091-R K-SW1
Q712 2SA1091-R K-SW3
Q702 2SC2785 G-DRIVE
Q703 2SC2785 R-DRIVE
Q701 2SC2785 B-DRIVE
Q714 2SC2551-R V. BLK-INV.
Q713 2SC2551-R V. BLK-OUT
D715 1SS83 PROTECT11
D716 1SS83 PROTECT12
D717 1SS83 PROTECT13
D709 1SS83 PROTECT9
D708 1SS83 PROTECT8
D707 1SS83 PROTECT7
D706 1SS148 PROTECT6
D705 1SS148 PROTECT5
D704 1SS148 PROTECT4
D703 1SS148 PROTECT3
D702 1SS148 PROTECT2
D701 1SS148 PROTECT1
D713 1SS83 PROTECT10
FL703
FL702
FL701
TO F-6

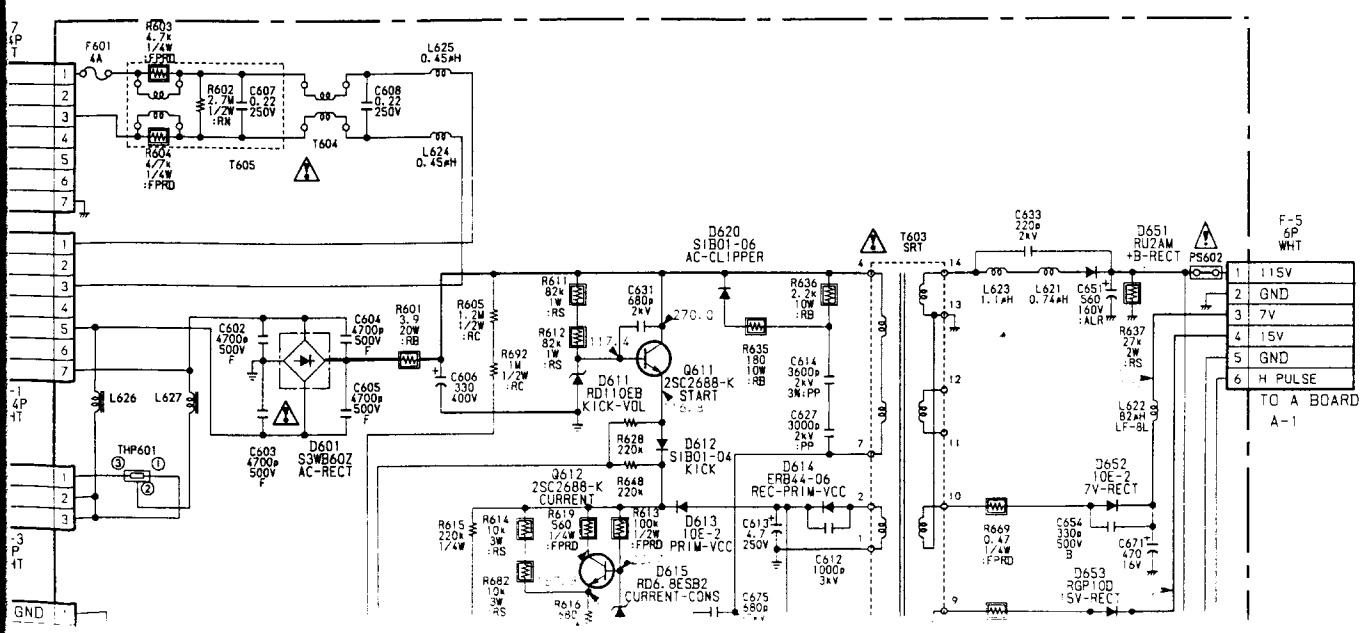

AC220-240V 50Hz
F-7 7B4P WHT
F601 4A
S901
J
(POWER SW)
J-1 7B4P WHT
F-1 7B4P WHT
L626
THP601
F-3 3P WHT
TO COBOARD
C-4
GND
FROM C BOARD

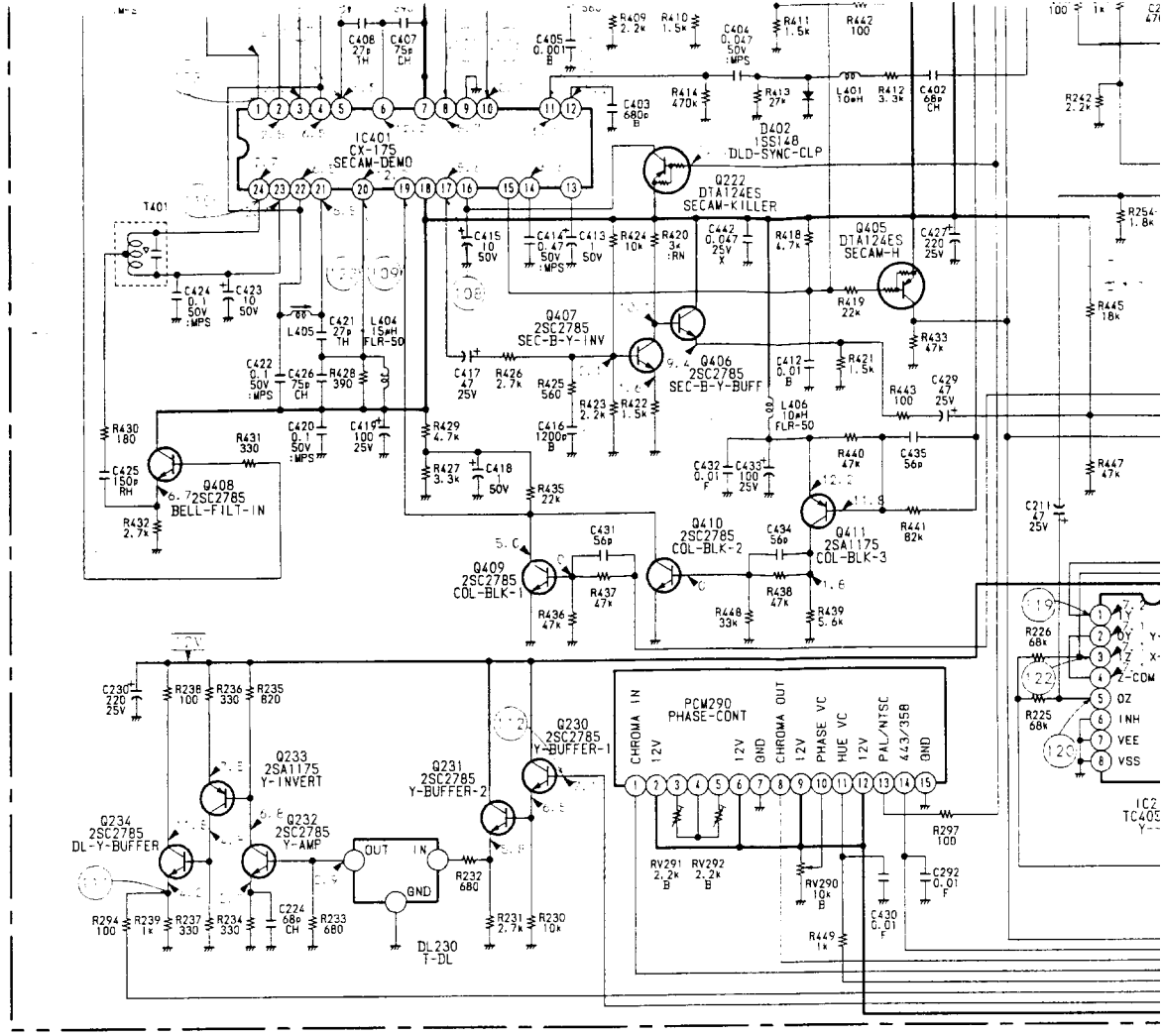




C BOARD WAVEFORM



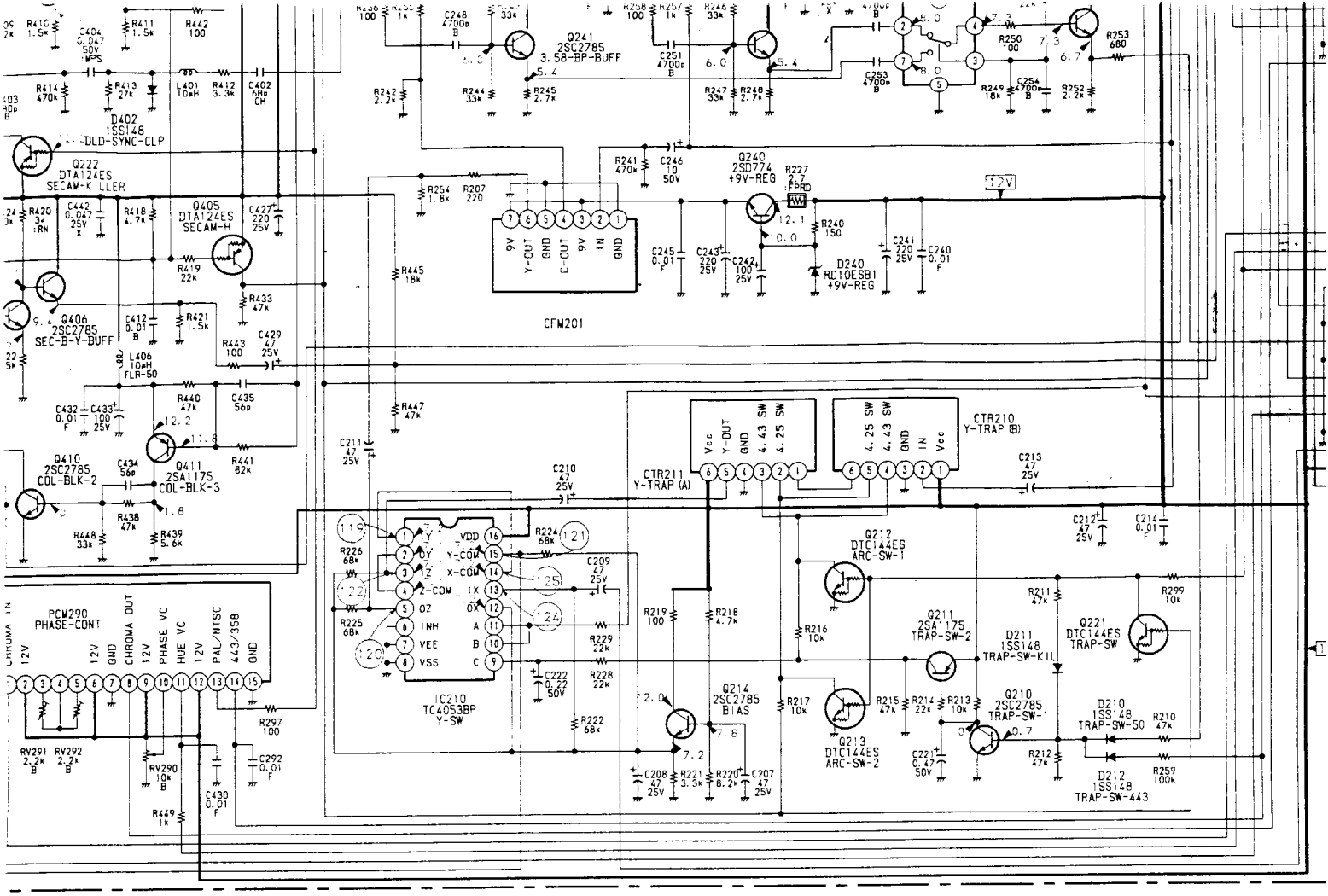


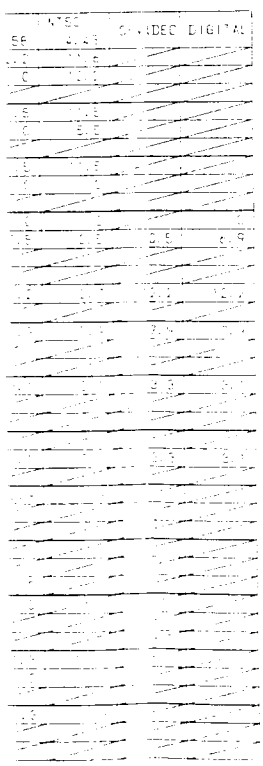


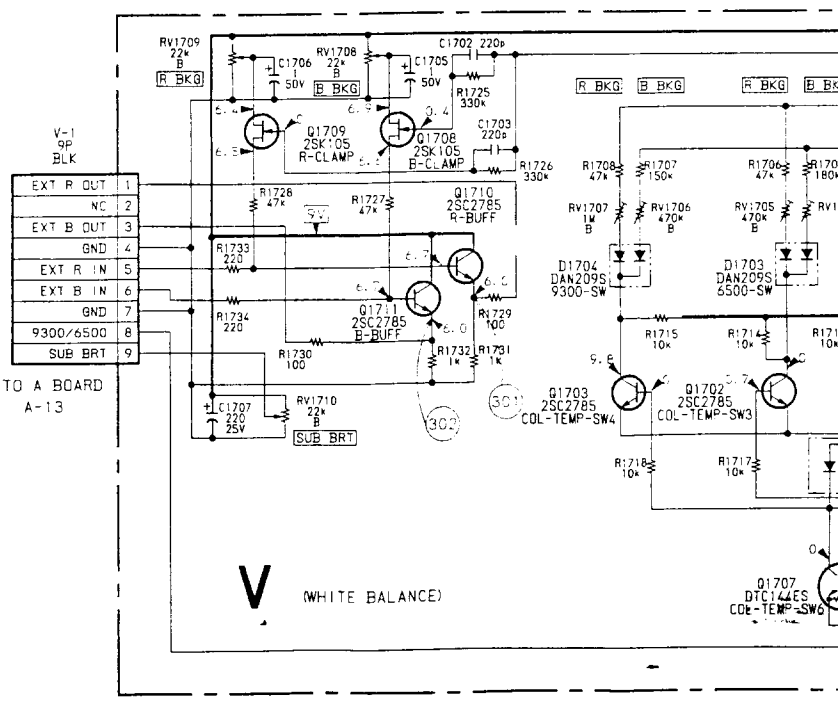
BA BOARD

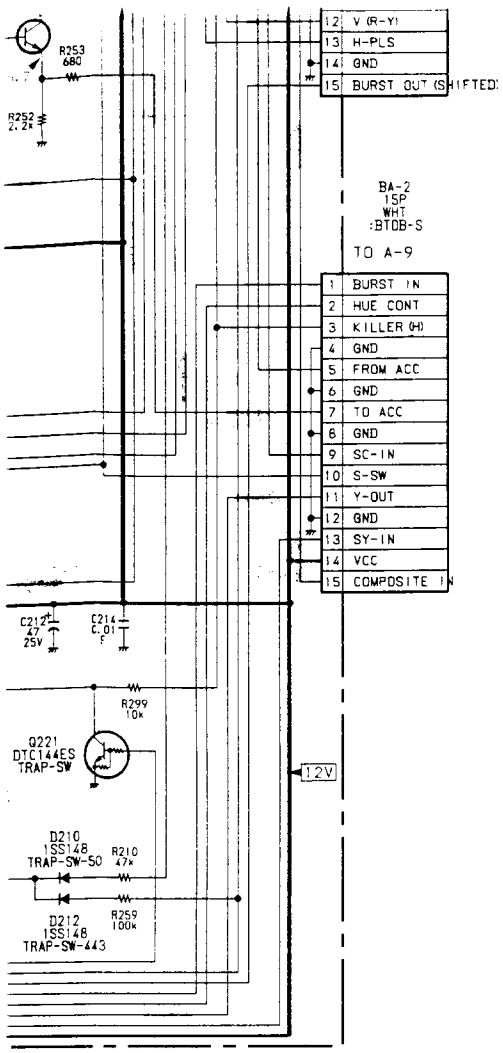
IC NO	PIN NO	PAL	SECAM	NTSC 3.58	NTSC 4.43	S-VIDEO
IC201	9	0	0	0	0	0
IC210	9	12.2	12.2	0	12.2	0
	10	0	0	0	0	0
	11	0	0	0	12.2	12
Q250	1	4.7	10.6-1.6	0	0	0
	2	2.6	2.7	2.4	2.4	2.4
	5	0	0	10.9	10.9	10
	9,10,11	3.3	3.4	3.1	3.1	3
	12,13	12.2	12.2	0	0	0
Q251		10.8	10.8	10.8	10.8	10.4
	2,13	7.4	10.8	7.3	7.3	7
	3	7.3	7.3	7.3	7.3	7
	4	10.8	0	10.8	10.8	10.4
	6	0	0	0	0	0
	7	0	0	0	0	0
	8	0	0	0	0	0
	12	7.4	10.8	3.6	3.6	3
	14	7.2	10.8	3.6	3.6	3
	15	12.2	12.2	0	0	0
	16	0.6	0.6	0	0	0
	18	0	0	0	0	0
Q451	15	12.2	0	0	0	0
	16	7.4	6.5	0	0	0

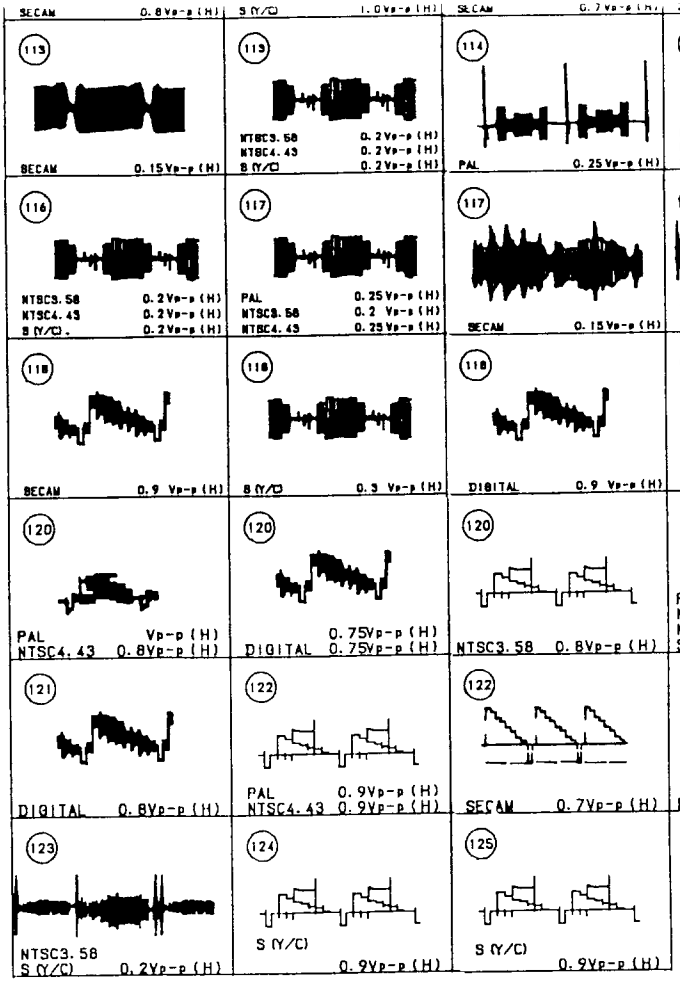
Q NO.	PA	SECAM	NTSC 3.58	NTSC 4.43	S-VIDEO
Q201					
Q210					
Q250					
Q251					


Q241
2SC2785
3.58-BP-BUFF
D402
1SS148
-DLD-SYNC-CLP
Q222
DTA124ES
SECAM-KILLER
Q405
DTA124ES
SECAM-H
Q406
2SC2785
SEC-B-Y-BUFF
Q410
2SC2785
COL-BLK-2
Q411
2SA1175
COL-BLK-3
Q240
2SD774
+9V-REG
D240
RD10ESB1
+9V-REG
CFM201
9V
Y-OUT
GND
C-OUT
9V
IN
GND
CTR211
Y-TRAP (A)
CTR210
Y-TRAP (B)
Vcc
Y-OUT
GND
4.43 SW
4.25 SW
4.25 SW
4.43 SW
GND
IN
Vcc
PCM290
PHASE-CONT
12V
12V
GND
CHROMA OUT
12V
PHASE VC
HUE VC
12V
PAL/NTSC
443/358
GND
IC210
TC4053BP
Y-SW
VDD
Y-COM
X-COM
Z-COM
INH
VEE
VSS
Q212
DTC144ES
ARC-SW-1
Q213
DTC144ES
ARC-SW-2
Q214
2SC2785
BIAS
Q211
2SA1175
TRAP-SW-2
Q210
2SC2785
TRAP-SW-1
D211
1SS148
TRAP-SW-KIL
Q221
DTC144ES
TRAP-SW
D210
1SS148
TRAP-SW-50
D212
1SS148
TRAP-SW-443

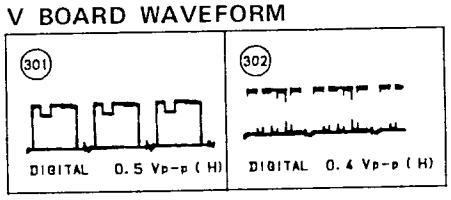


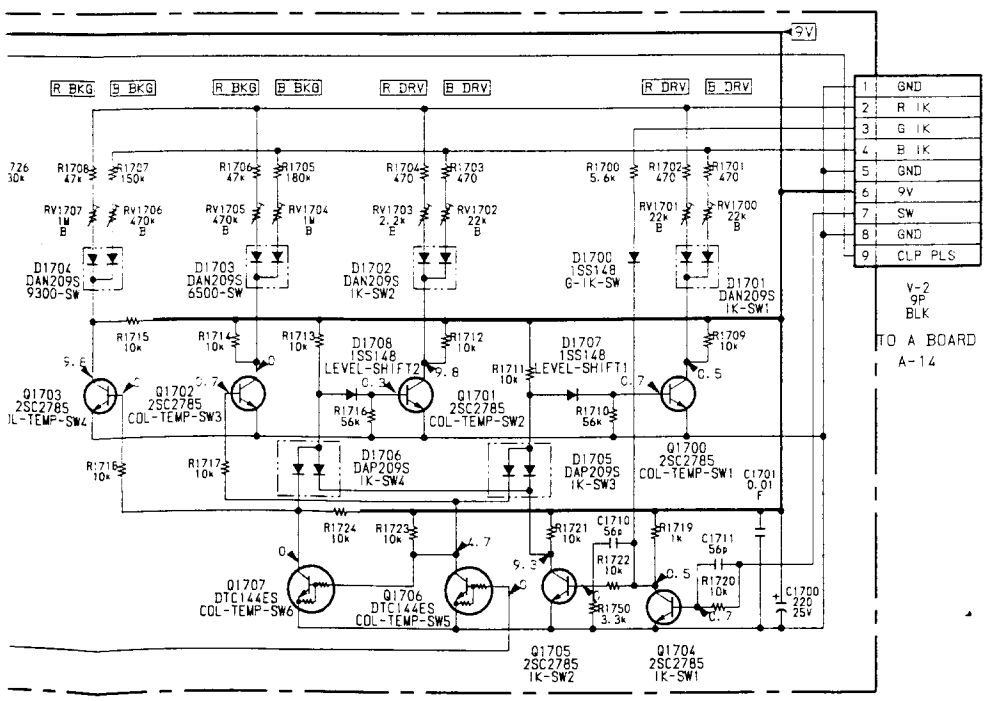

V-1
9P
BLK
EXT R OUT 1
NC 2
EXT B OUT 3
GND 4
EXT R IN 5
EXT B IN 6
GND 7
9300/6500 8
SUB BRT 9
TO A BOARD
A-13
R BKG
B BKG
SUB BRT
Q1709
2SK105
R-CLAMP
Q1708
2SK105
B-CLAMP
Q1710
2SC2785
R-BUFF
Q1711
2SC2785
B-BUFF
D1704
DAN209S
9300-SW
D1703
DAN209S
6500-SW
Q1703
2SC2785
COL-TEMP-SW4
Q1702
2SC2785
COL-TEMP-SW3
Q1707
DTC144ES
COL-TEMP-SW6
V
(WHITE BALANCE)



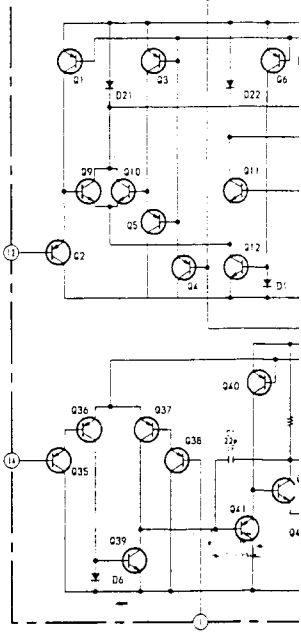


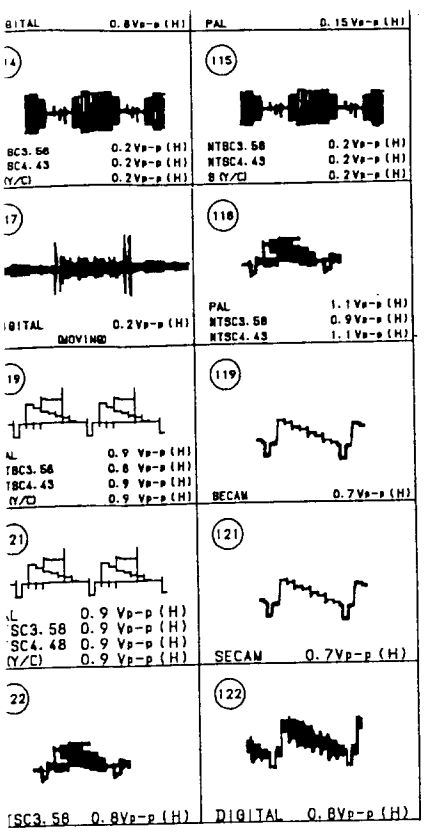
V BOARD WAVEFORM

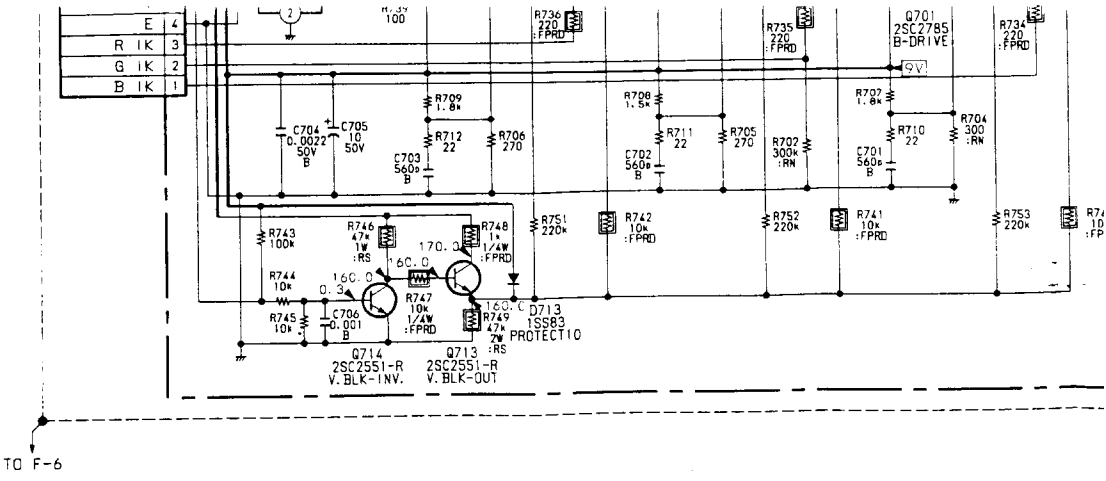


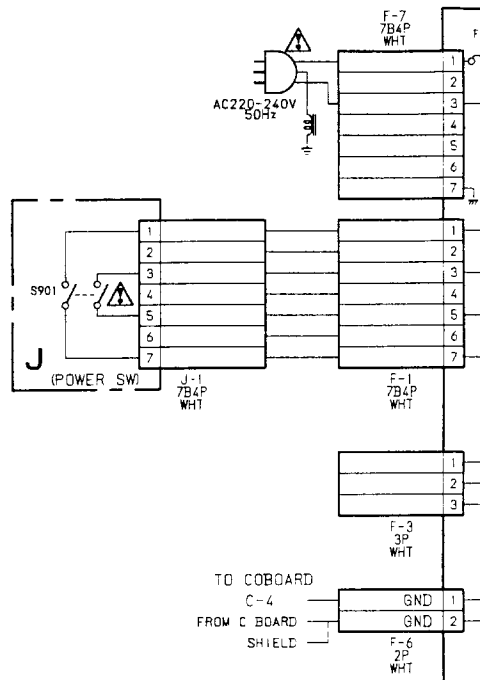


FE BOARD IC601 μPC13

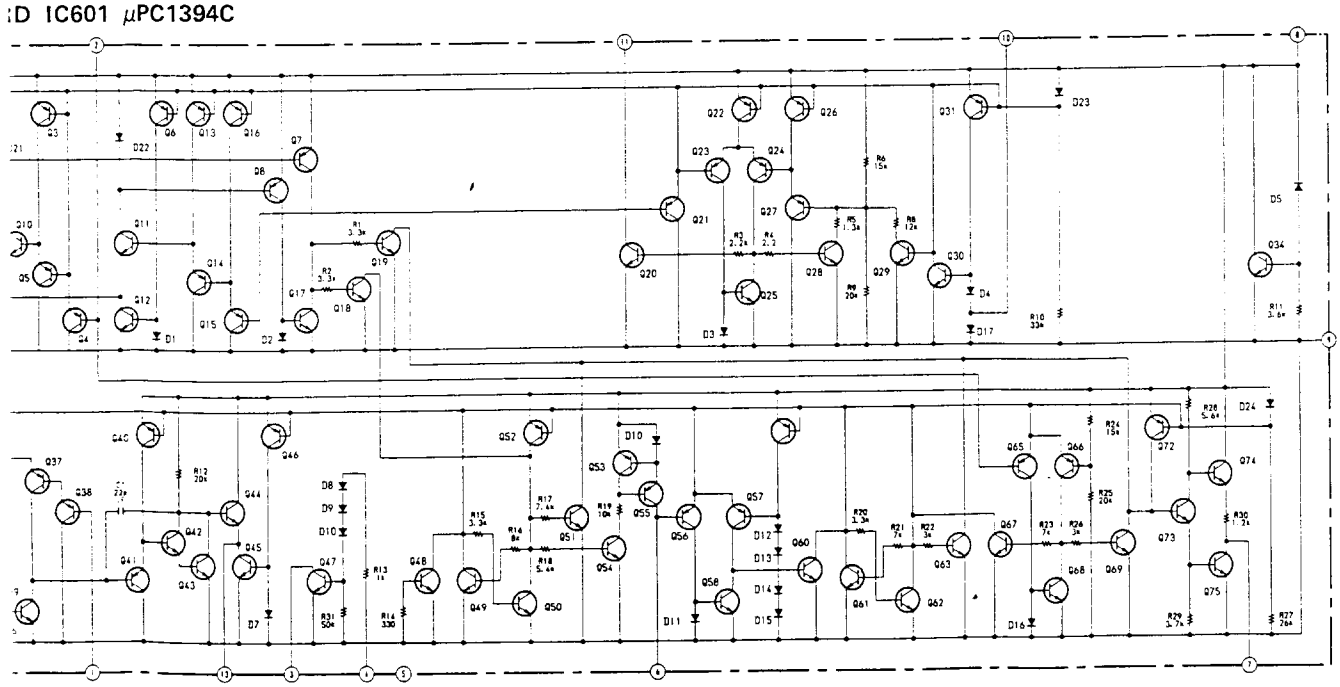


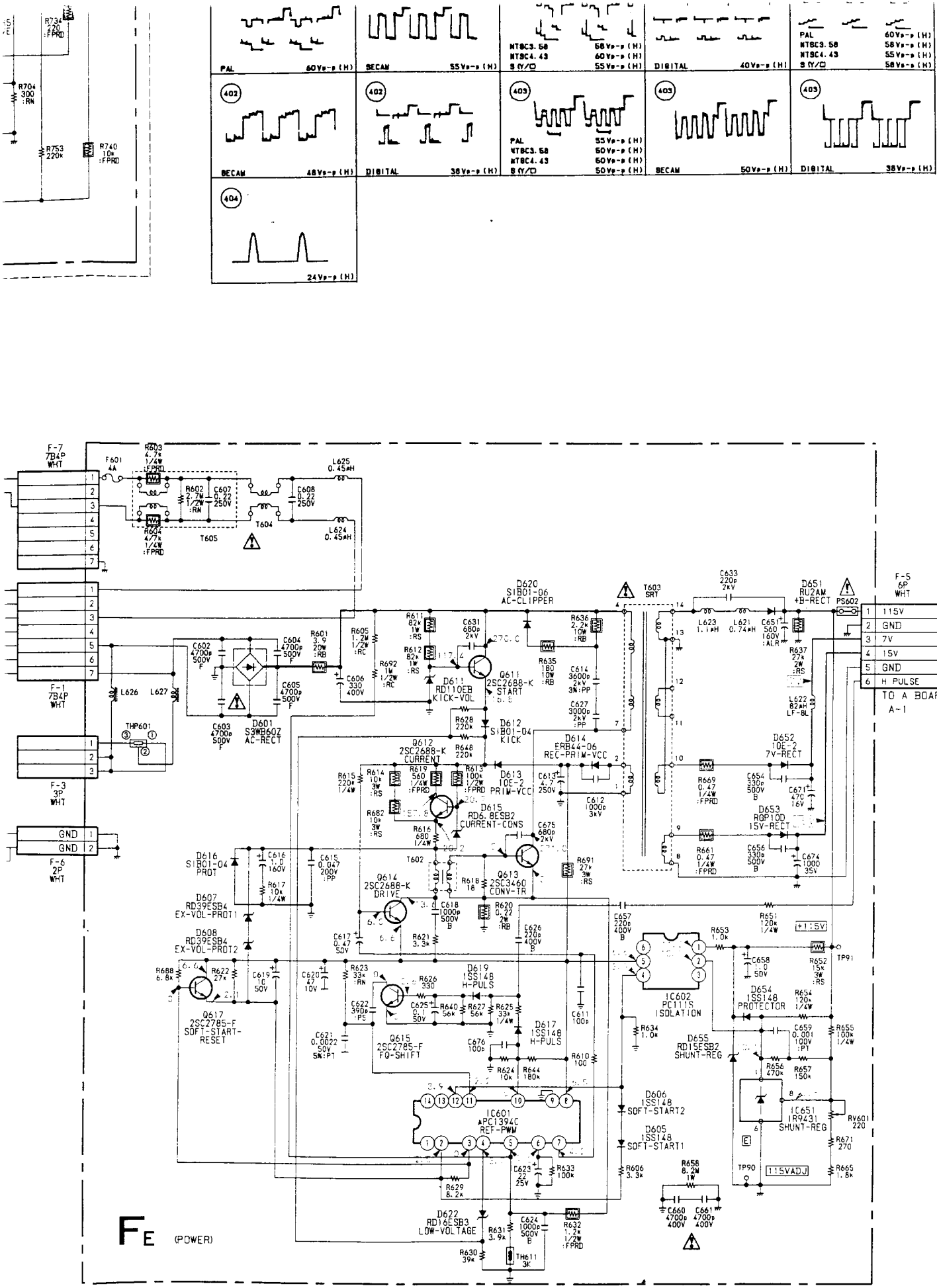






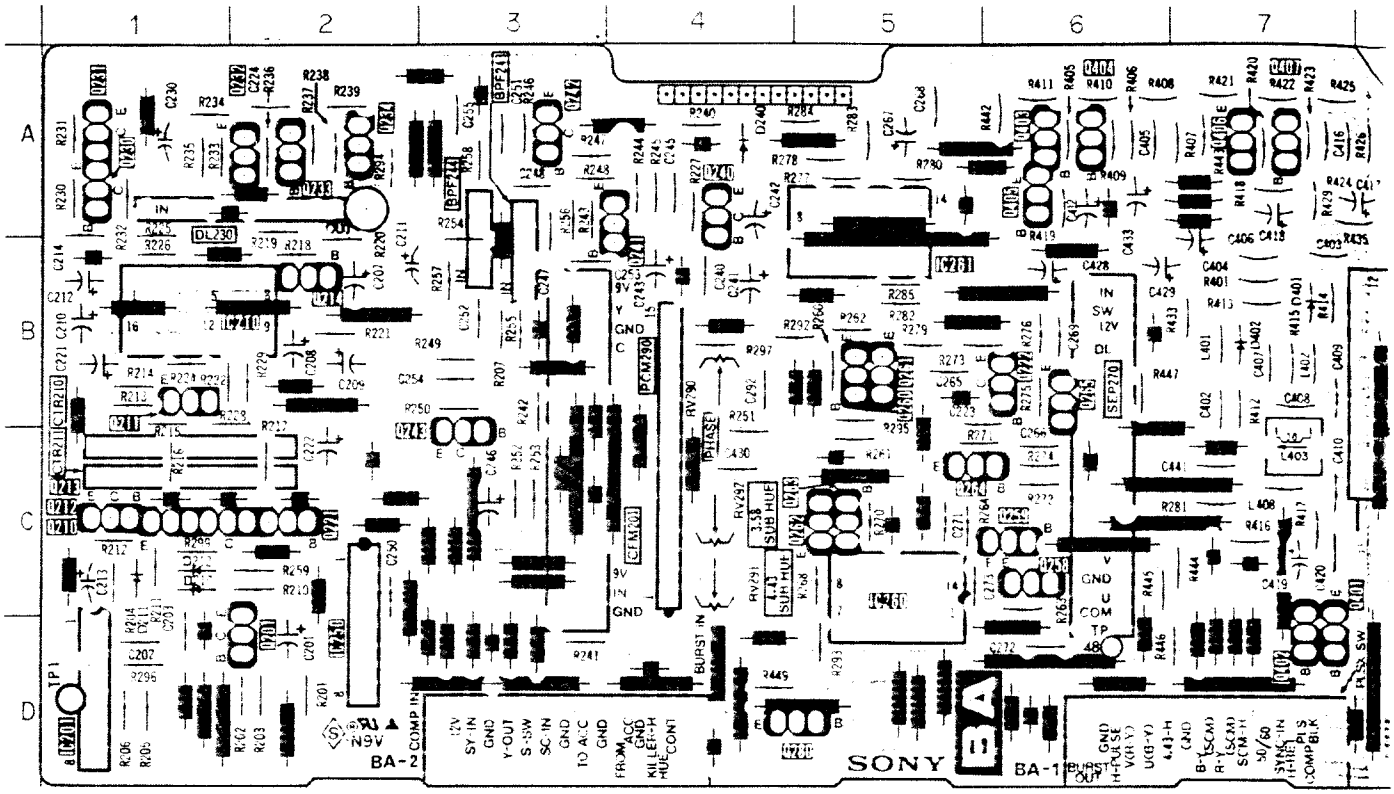
:D IC601 μPC1394C



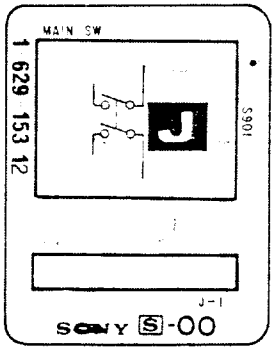

402
PAL 60Vp-p (H)
SECAM 55Vp-p (H)
NTSC3.58 58Vp-p (H)
NTSC4.43 60Vp-p (H)
S (Y/C) 55Vp-p (H)
DIGITAL 40Vp-p (H)
PAL 60Vp-p (H)
NTSC3.58 58Vp-p (H)
NTSC4.43 55Vp-p (H)
S (Y/C) 58Vp-p (H)
402
403
BECAM 48Vp-p (H)
DIGITAL 38Vp-p (H)
PAL 55Vp-p (H)
NTSC3.58 60Vp-p (H)
NTSC4.43 60Vp-p (H)
S (Y/C) 50Vp-p (H)
403
BECAM 50Vp-p (H)
403
DIGITAL 38Vp-p (H)
404
24Vp-p (H)
R704 300 :RN
R753 220k
R740 10k :FPRD
F-7 7B4P WHT
F601 4A
R603 4.7k 1/4W :FPRD
L625 0.45μH
R602 2.7M 1/2W :RN
C607 0.22 250V
C608 0.22 250V
T604
R604 4.7k 1/4W :FPRD
T605
L624 0.45μH
F-1 7B4P WHT
L626
L627
THP601
F-3 3P WHT
GND
GND
F-6 2P WHT
C602 4700p 500V F
C603 4700p 500V F
C604 4700p 500V F
C605 4700p 500V F
D601 S3WB60Z AC-RECT
R601 3.9 2W :RB
R605 1.2M 1/2W :RC
C606 330 400V
R692 1M 1/2W :RC
D620 SIB01-06 AC-CLIPPER
R611 82k 1W :RS
R612 82k 1W :RS
C631 680p 2kV
D611 RD110EB KICK-VOL
Q611 2SC2688-K START
R636 2.2k 10W :RB
R635 180 10W :RB
C614 3600p 2kV 3% :PP
C627 3000p 2kV :PP
D612 SIB01-04 KICK
R628 220k
R648 220k
Q612 2SC2688-K CURRENT
D614 ERB44-06 REC-PRIM-VCC
R615 220k 1/4W
R614 10k 3W :RS
R619 560 1/4W :FPRD
R613 100k 1/2W :FPRD
D613 10E-2 PRIM-VCC
C613 4.7 250V
C612 1000p 3kV
R682 10k 3W :RS
D615 RD6.8ESB2 CURRENT-CONS
R616 680 1/4W
C675 680p 2kV
T602
Q613 2SC3460 CONV-TR
R691 27k 3W :RS
D616 SIB01-04 PROT
C616 1.0 160V
C615 0.047 200V :PP
R617 10k 1/4W
D607 RD39ESB4 EX-VOL-PROT1
D608 RD39ESB4 EX-VOL-PROT2
Q614 2SC2688-K DRIVE
R618 18
C618 1000p 500V B
R620 0.22 2W :RB
C626 220p 400V B
C617 0.47 50V
R621 3.3k
R688 6.8k
R622 27k
C619 10 50V
Q617 2SC2785-F SOFT-START-RESET
C620 47 10V
R623 33k :RN
R626 330
D619 1SS148 H-PULS
C625 0.1 50V
R640 56k
R627 56k
R625 33k 1/4W
C622 390p :PS
C621 0.0022 50V 5% :PT
Q615 2SC2785-F FQ-SHIFT
C676 100p
D617 1SS148 H-PULS
R610 100
R624 10k
R644 180k
IC601 MPC1394C REF-PWM
C623 33 25V
R633 100k
R629 8.2k
D622 RD16ESB3 LOW-VOLTAGE
R631 3.9k
C624 1000p 500V B
R632 1.2k 1/2W :FPRD
R630 39k
TH611 3k
C633 220p 2kV
D651 RU2AM +B-RECT
PS602
L623 1.1μH
L621 0.74μH
C651 560 160V :ALR
R637 27k 2W :RS
L622 82μH LF-8L
F-5 6P WHT
1 115V
2 GND
3 7V
4 15V
5 GND
6 H PULSE
TO A BOARD A-1
D652 10E-2 7V-RECT
R669 0.47 1/4W :FPRD
C654 330p 500V B
C671 470 16V
D653 RGP10D 15V-RECT
R661 0.47 1/4W :FPRD
C656 330p 500V B
C674 1000 35V
C657 220p 400V B
R653 1.0k
R651 120k 1/4W
+115V
IC602 PC111S ISOLATION
C658 1.0 50V
R652 15k 3W :RS
TP91
D654 1SS148 PROTECTOR
R654 120k 1/4W
R634 1.0k
C659 0.001 100V :PT
R655 100k 1/4W
D655 RD15ESB2 SHUNT-REG
R656 470k
R657 150k
IC651 IR9431 SHUNT-REG
RV601 220
R671 270
TP90
115VADJ
R665 1.8k
D606 1SS148 SOFT-START2
D605 1SS148 SOFT-START1
R606 3.3k
R658 8.2M 1W
C660 4700p 400V
C661 4700p 400V
FE (POWER)

BA [CHROMA FOR 4 SYSTEM] **J** [POWER SW]

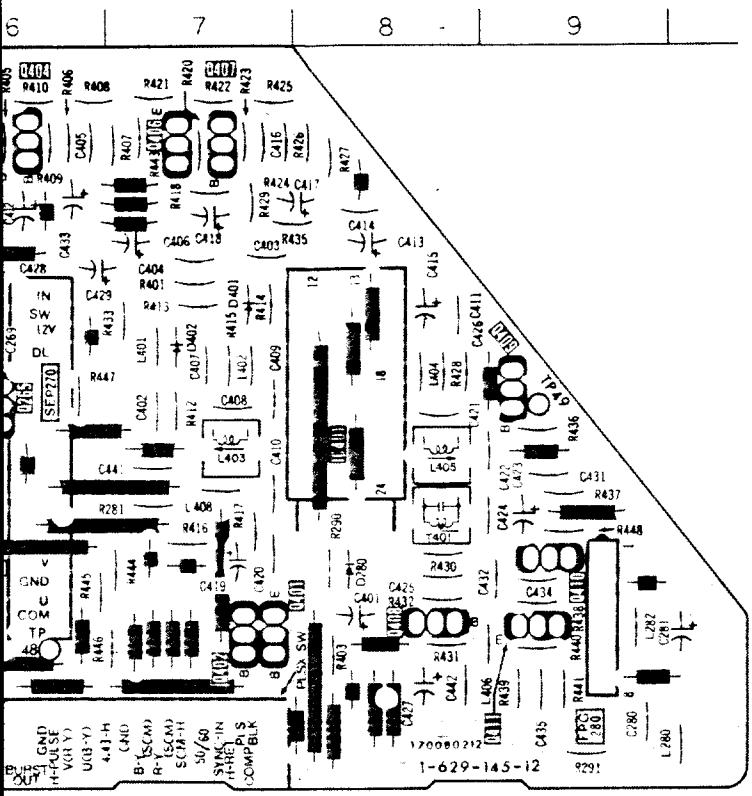
– BA Board –



– J Board –



J [POWER SW]

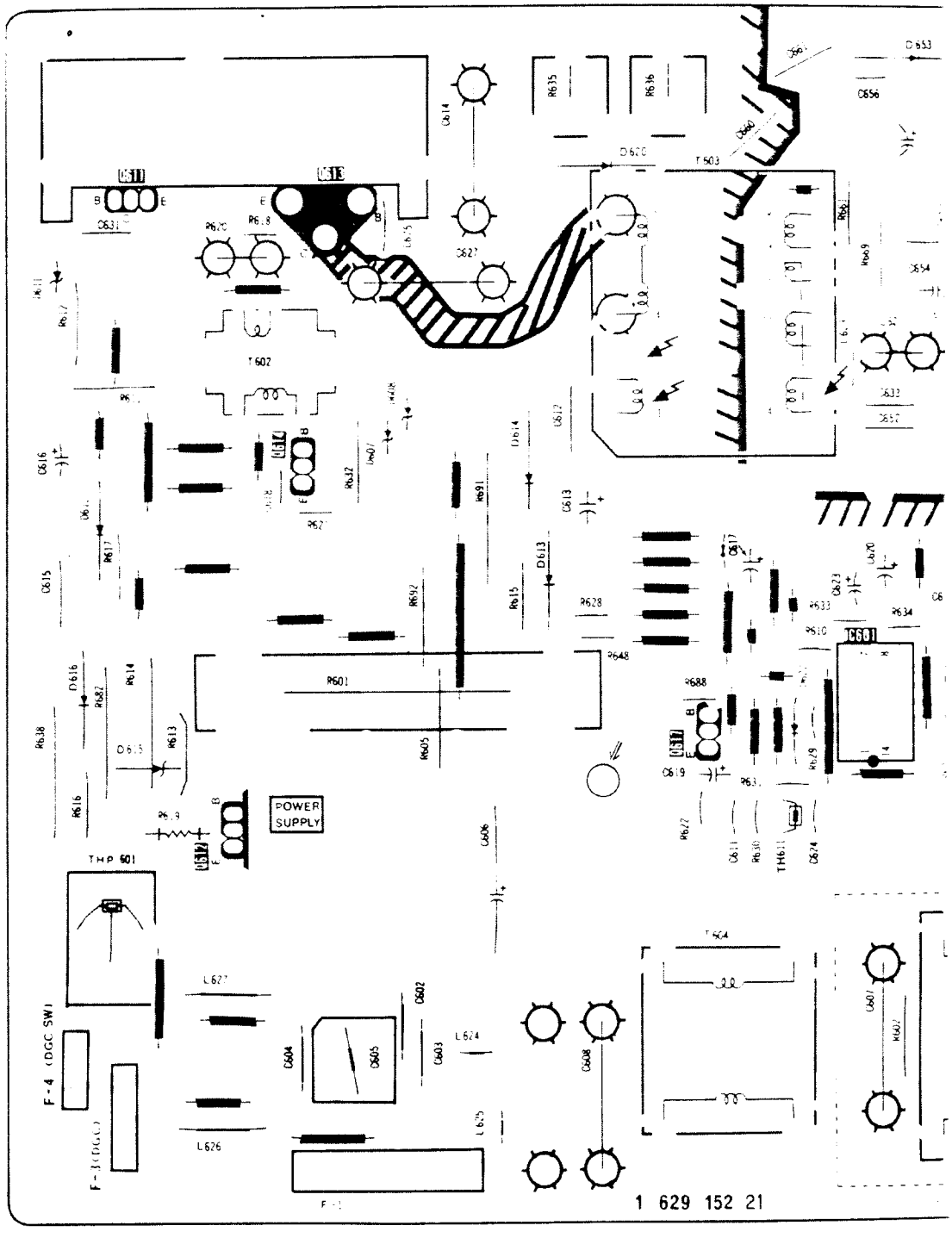


BA Board

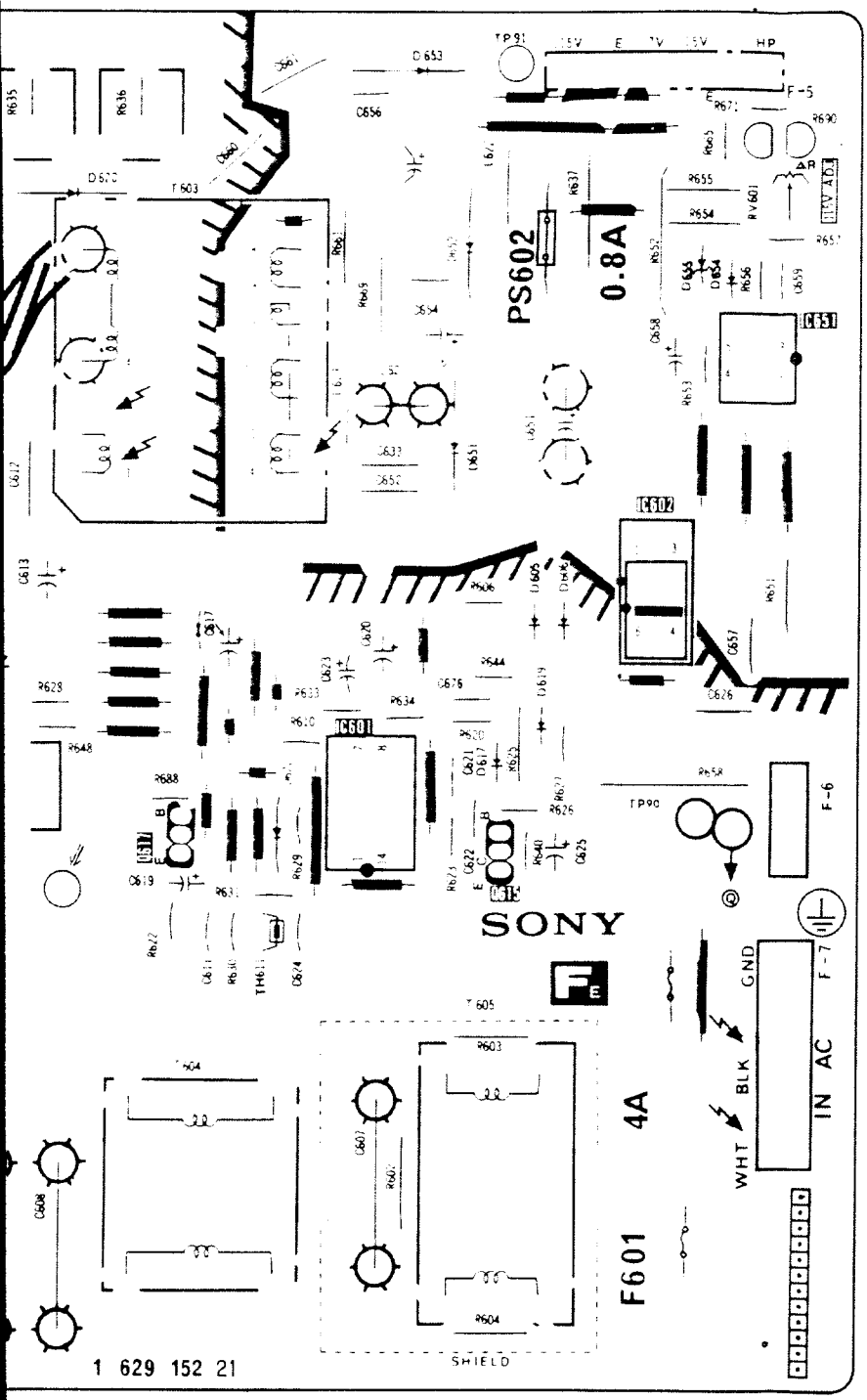
IC		TRANSISTOR				DIODE	
IC201	D-1	Q201	D-2	Q241	A-4	D210	C-1
IC210	B-1	Q210	C-1	Q242	A-3	D211	C-1
IC250	D-2	Q211	B-1	Q243	C-3	D212	C-1
IC260	C-5	Q212	C-1	Q258	C-6	D240	A-4
IC261	B-5	Q213	C-1	Q259	C-6	D280	C-8
IC401	B-8	Q214	B-2	Q260	B-5	D401	B-7
		Q221	C-2	Q261	B-5	D402	B-7
		Q222	B-6	Q262	C-5	VARIABLE RESISTOR	
		Q230	A-1	Q263	C-5	RV290	B-4
		Q231	A-1	Q264	C-5	RV291	C-4
		Q232	A-2	Q265	B-6	RV292	C-4
		Q233	A-2	Q280	D-5		
		Q234	A-2	Q401	D-7		
				Q402	D-7		
				Q403	A-6		
				Q404	A-6		
				Q405	A-6		
				Q406	A-7		
				Q407	A-7		
				Q408	D-8		
				Q409	B-9		
				Q410	C-9		
				Q411	D-9		

ODE
C-1
C-1
C-1
A-4
C-8
B-7
B-7
IABLE ISTOR
B-4
C-4
C-4

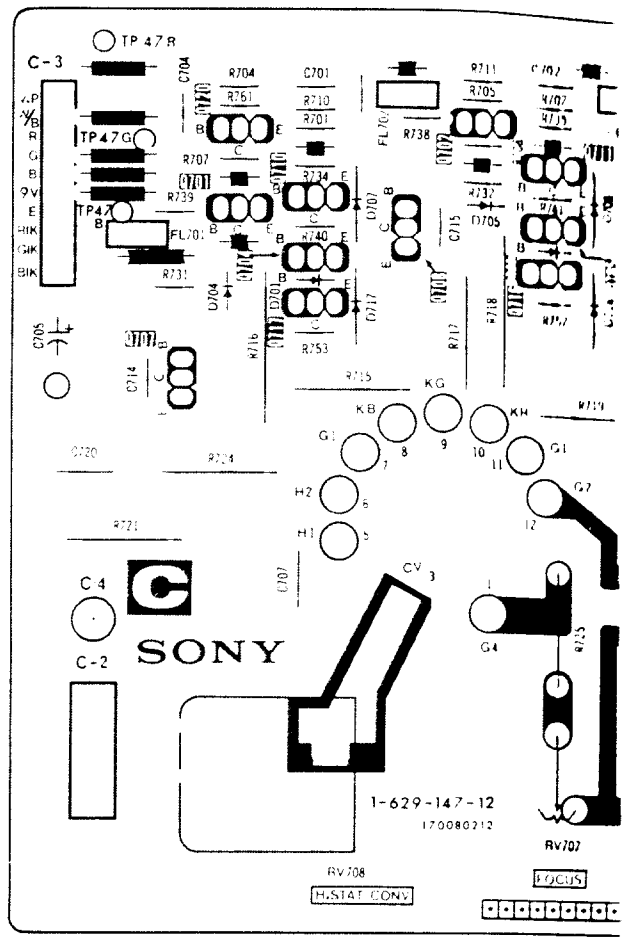
— FE Board —



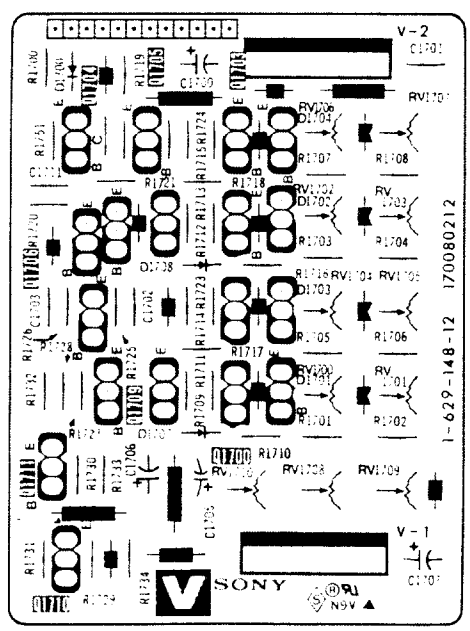
FE [POWER] **C** [R·G·B OUT] **V** [WHITE BALANCE]

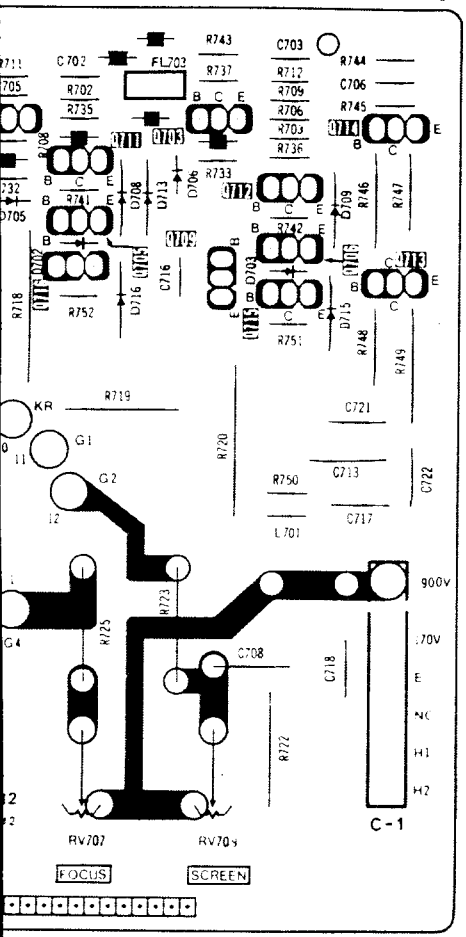


– C Board –

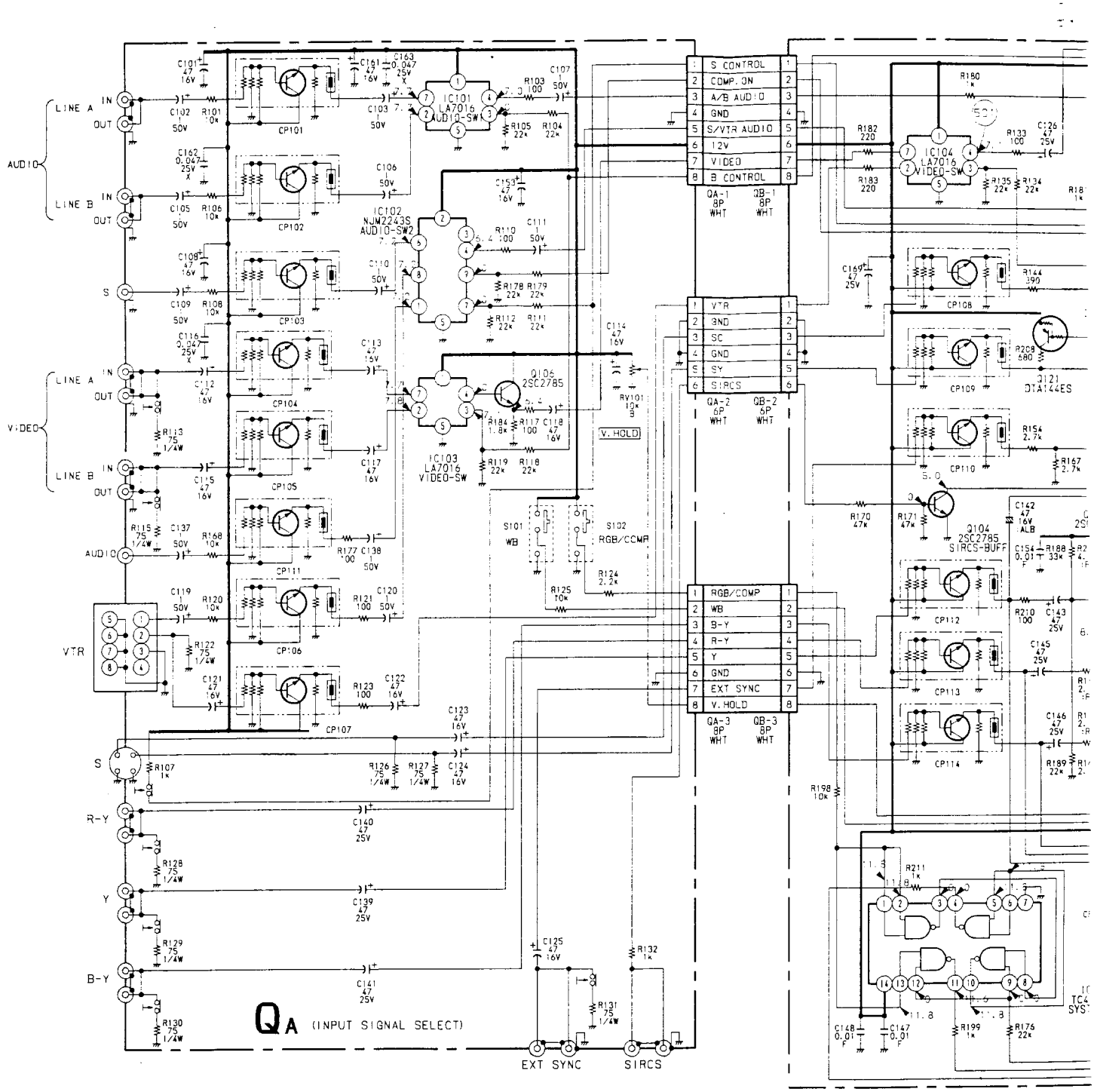


– V Board –




C702
FL702
R743
R737
C703
R712
R709
R706
R703
R736
R744
C706
R745
R735
R702
R741
R733
R742
R746
R747
R752
C716
R751
R748
R749
R719
KR
G1
G2
R720
C721
C713
R750
C722
C717
L701
900V
R723
R725
C708
C718
R722
RV707
RV709
C-1
FOCUS
SCREEN

(QA, QB Board: PVM-1444QM)

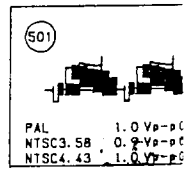


QB BOARD

IC NO	PIN NO	PAL	SECAM	NTSC 3.58	NTSC 4.43	S-VIDEO
IC104	(2)	7.8	7.8	7.8	7.8	7.7
	(3)	0.7	0.7	0.7	0.7	5.6
	(7)	7.7	7.7	7.7	7.7	7.8
IC105	(1)	7.8	7.8	7.8	7.8	7.7
	(1)	0.5	0.5	0.5	0.5	5.3
	(7)	7.7	7.7	7.7	7.7	7.8
IC106	(7)	0.4	0.4	0.4	0.4	3.3

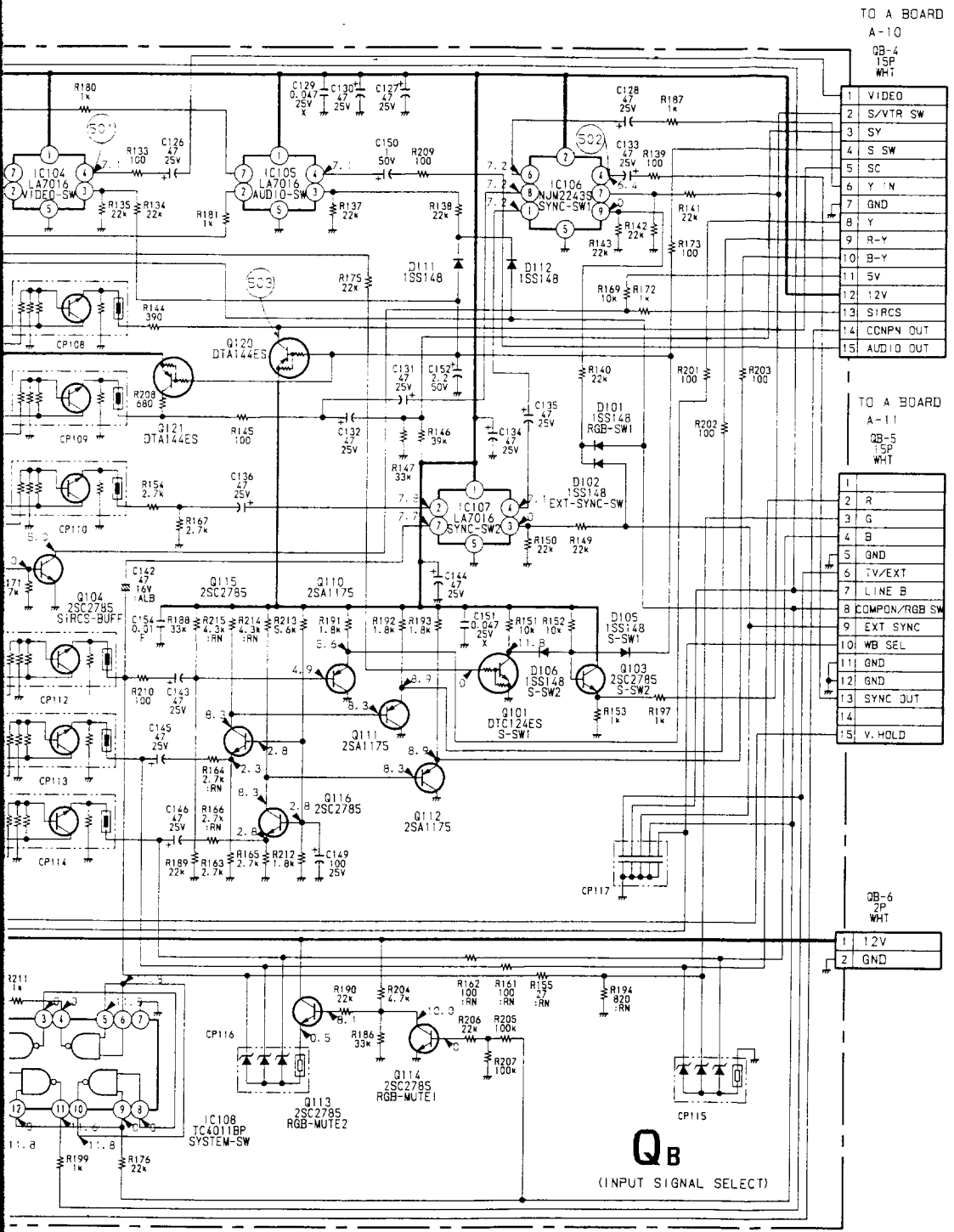
Q NO.		PAL	SECAM	NTSC 3.58	NTSC 4.43	S-VIDEO
Q103	B	1.9	1.9	1.9	1.9	11.3
	C					
	E	1.3	1.3	1.3	1.3	10.5
Q120	B	1.3	1.3	1.3	1.3	11.3
	C	11.3	11.3	11.3	11.9	4.7
	E					

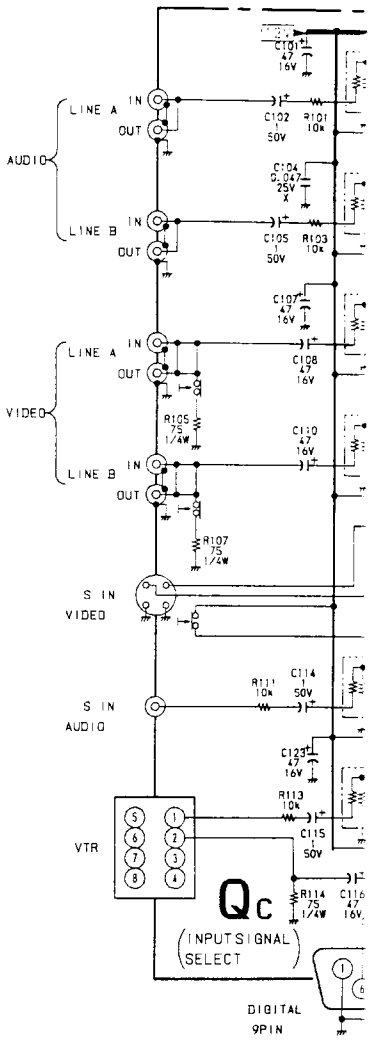
QB BOARD WA



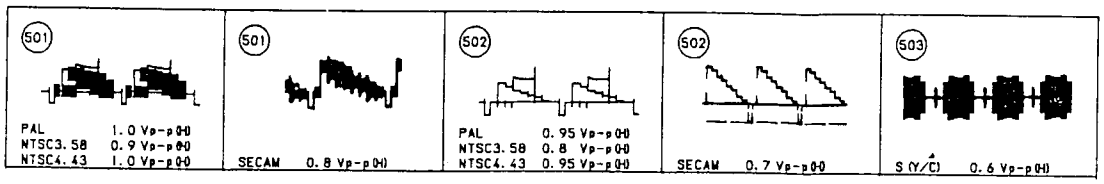
8 9 10 11 12 13 14 15

(QC, QD, QE Board: PVM-1442QM)

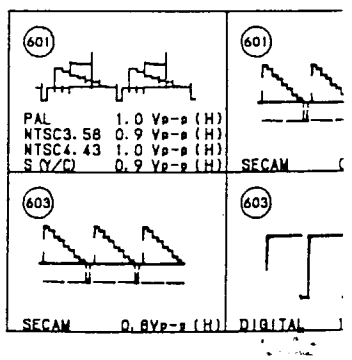




QB BOARD WAVEFORM

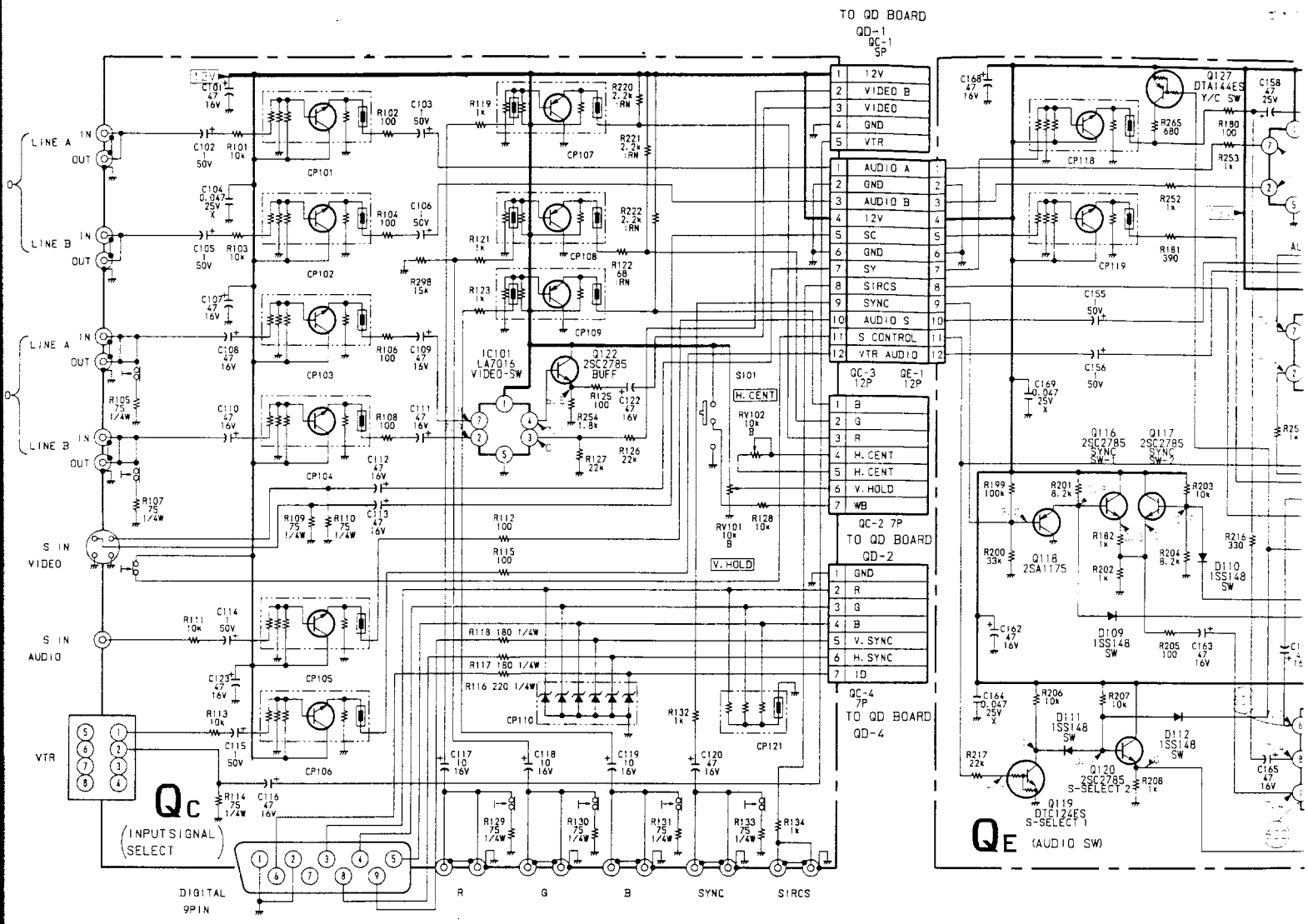


QE BOARD WAVEFORM



14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22

QD, QE Board: PVM-1442QM)



QE BOARD WAVEFORM

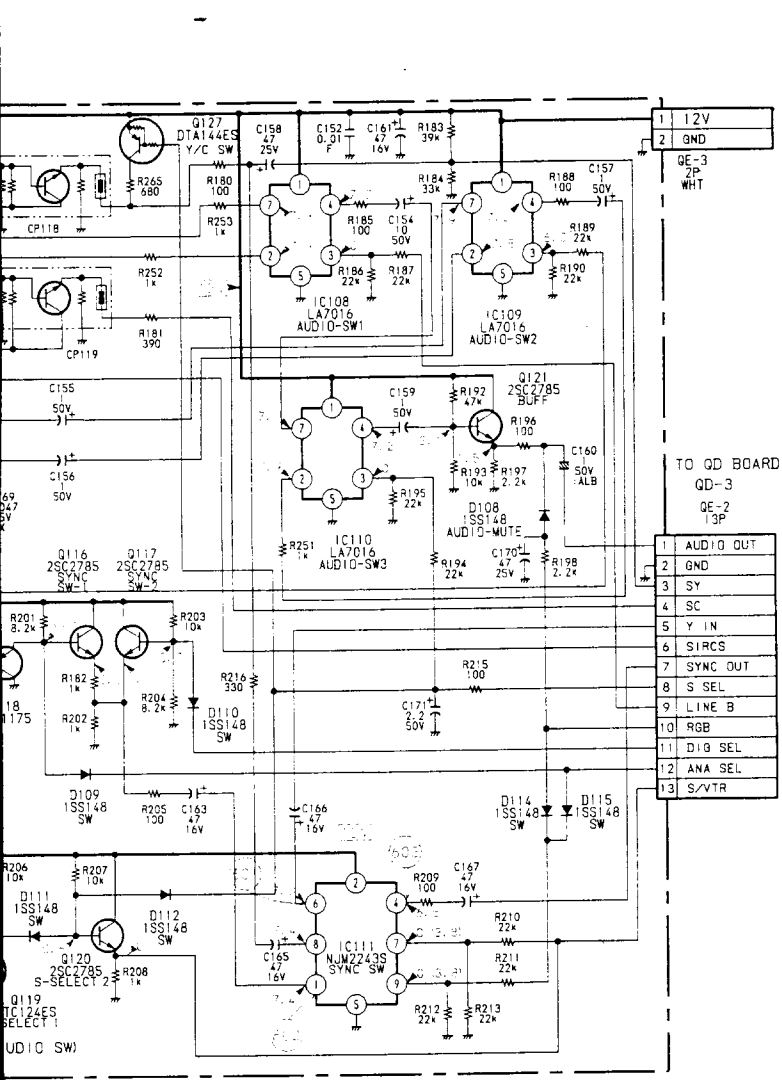
(601) PAL 1.0 Vp-p (H) NTSC3.58 0.9 Vp-p (H) NTSC4.43 1.0 Vp-p (H) S (Y/C) 0.9 Vp-p (H)	(601) SECAM 0.8Vp-p (H)	(601) DIGITAL 0.9Vp-p (H)	(602) DIGITAL 1.3Vp-p (H)	(603) PAL 1.0Vp-p (H) NTSC3.58 0.9Vp-p (H) NTSC4.43 1.0Vp-p (H) S (Y/C) 0.9Vp-p (H)
(603) SECAM 0.8Vp-p (H)	(603) DIGITAL 1.3Vp-p (H)			

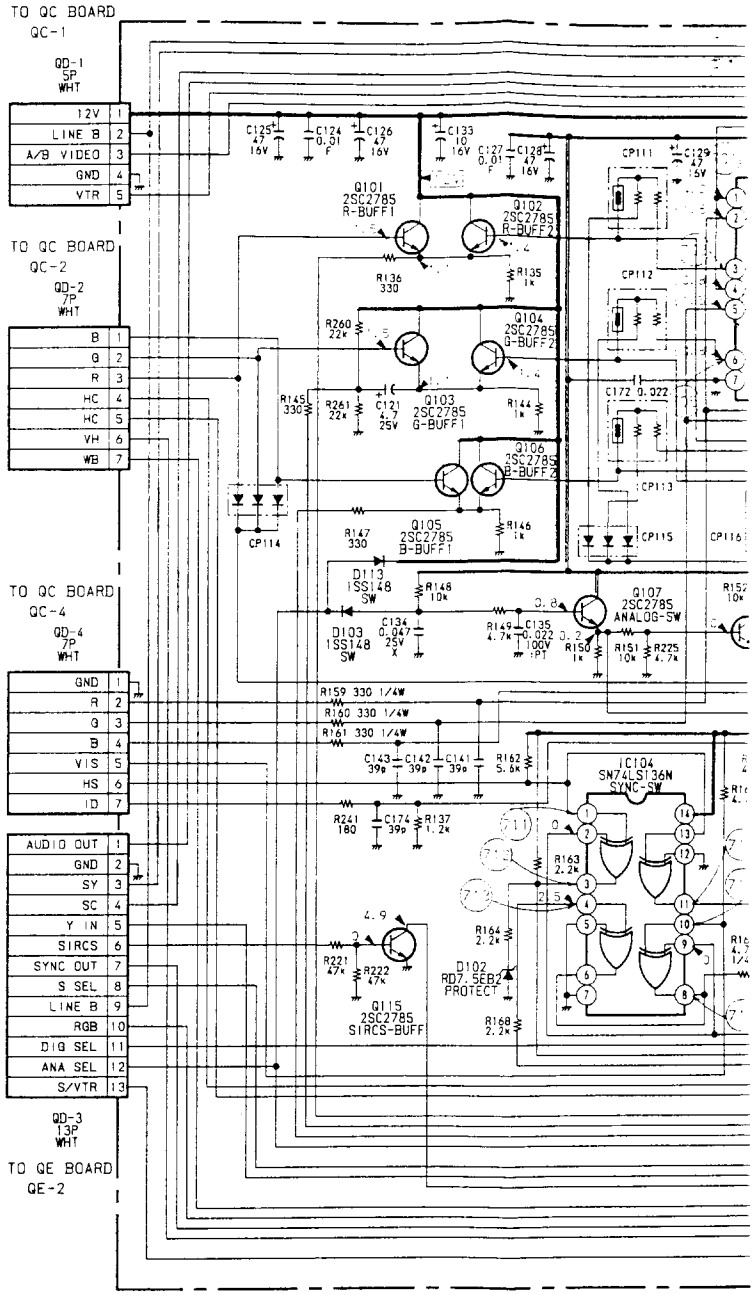
QD BOARD

IC NO.	PIN NO.	PAL	SECAM	NTSC 3.58
IC104	(1)	5.0	5.0	5.0
	(2)	4.5	4.5	4.5
	(3)(43)	0	0	0
	(42)	0.8	0.8	0.8
	(41)	4.7	4.7	4.7
	(40)	5.0	5.0	5.0
IC105	(2)	0.4	0.5	0.5
	(3)	0	0	0
	(31)(33)	0.5	0.5	0.5
IC106	(1)	0	0	0
	(3)	0	0	0
IC107	(1)(6)	0	0	0
	(2)	0.2	0.3	0.5
	(4)	4.5	4.5	4.5
	(5)	0	0	0
	(7)	0	0	0

Q NO.		PAL	SECAM	NTSC 3.58
Q103	B	1.5	1.5	1.5
	C	0.7	0.8	0.9
	E	0	0	0
Q104	B	0.7	0.8	0.9
	C	5.0	5.0	5.0
	E	0	0	0
Q105	B	0.7	0.8	0.9
	C	5.0	5.0	5.0
	E	0	0	0
Q106	B	0.7	0.8	0.9
	C	5.0	5.0	5.0
	E	0	0	0

21 | 22 | 23 | 24 | 25 | 26 | 27 | 28





BOARD

	PAL	SECAM	NTSC 3.58	NTSC 4.43	S-V DEC
(1)	5.0	5.0	5.0	3.4	3.5
(2)	4.5	4.6	4.5	4.5	4.2
(3)(5)	0	0	0	0	4.5
(12)	0.9	0.6	0.6	3.2	3.3
(10)	4.1	4.1	4.1	4.1	3.9
(13)	5.0	5.1	5.0	3.5	3.5
(4)	0.5	0.5	0.5	0.5	4.8
(6)	0	0	0	0	5.0
(7)(8)	0.5	0.5	0.5	0.5	4.6
(11)	0	0	0	0	4.3
(14)	0	0	0	5.6	0
(15)(16)	0	0	0	0	1.8
(9)	0.3	0.3	0.5	0.3	0.7
(17)	4.5	4.5	4.5	4.5	4.2
(18)	0	0	0	0	0.6
(19)	0	0	0	0	1.5

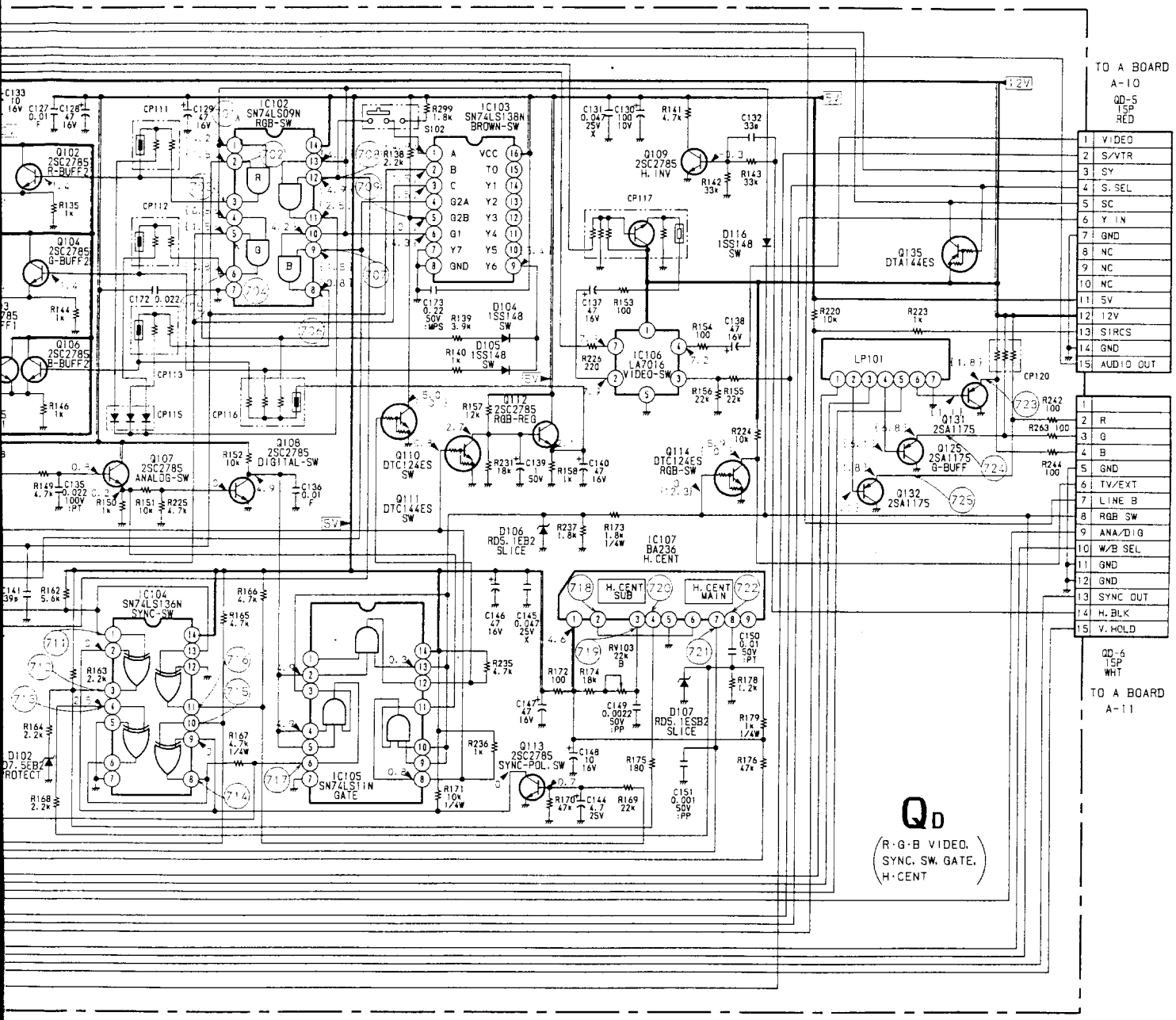
Q NO.	PAL	SECAM	NTSC 3.58	NTSC 4.43	S-VIDEO DEC	DIGITAL
5	1.5	1.5	1.5	1.5	1.5	1.8
2	3.7	3.7	3.7	3.7	3.7	3.7
3	1.4	1.4	1.4	1.4	1.4	1.8
1	3.2	3.2	3.2	3.2	3.2	3.7
4	3.5	3.5	3.5	3.5	3.5	3.5

QD BOARD WAVEFORM

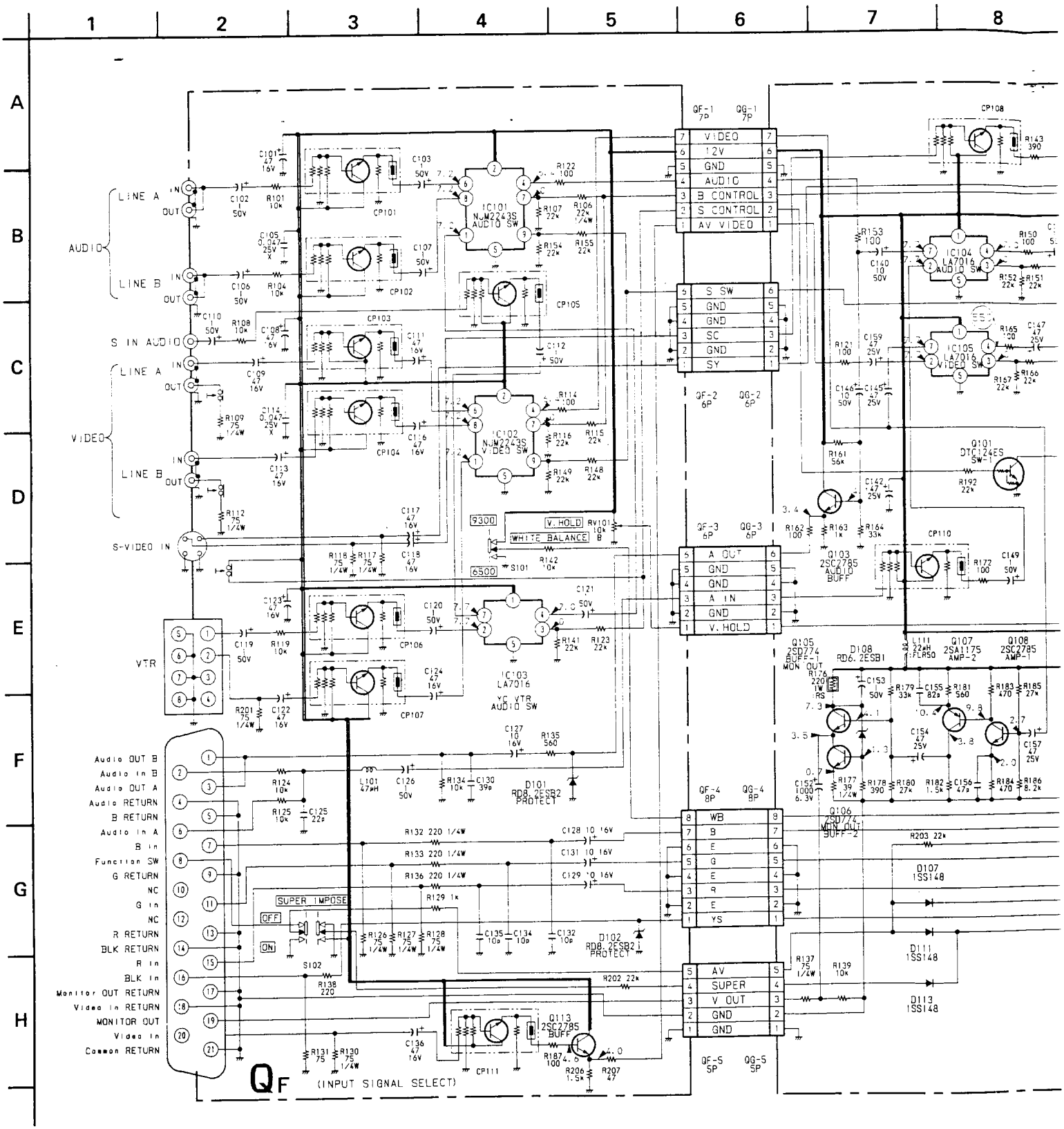
(701) DIGITAL 5.0 Vp-p (H)	(702) DIGITAL 3.0 Vp-p (H)	(703) DIGITAL 1.75 Vp-p (H)	(704) DIGITAL 3.0 Vp-p (H)	(705) DIGITAL 1.75Vp-p
(706) DIGITAL 1.75Vp-p (H)	(707) DIGITAL 3.0 Vp-p (H)	(708) DIGITAL 0.4 Vp-p (H)	(709) DIGITAL 0.2 Vp-p (H)	(710) DIGITAL 0.9 Vp-p
(711) DIGITAL 3.2Vp-p (H)	(712) DIGITAL 4.2Vp-p (H)	(713) DIGITAL 5.4Vp-p (H)	(714) DIGITAL 5.0Vp-p (H)	(715) DIGITAL 3.2Vp-p

28 29 30 31 32 33 34 35

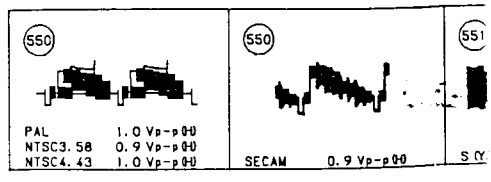
A B C D E F G H I J



0 Vp-p (H)	705 DIGITAL 1.75Vp-p (H)	706 DIGITAL 4.0 Vp-p (H)	707 DIGITAL 1.7 Vp-p (H)	708 3.8 Vp-p (H)	709 1.6 Vp-p (H)	720 4.3 Vp-p (H)
2 Vp-p (H)	710 DIGITAL 0.9 Vp-p (H)	721 1.75Vp-p (H)	722 4.0 Vp-p (H)	723 DIGITAL 0.45Vp-p (H)	724 DIGITAL 0.35Vp-p (H)	725 DIGITAL 0.45Vp-p (H)
0Vp-p (H)	719 DIGITAL 3.2Vp-p (H)					



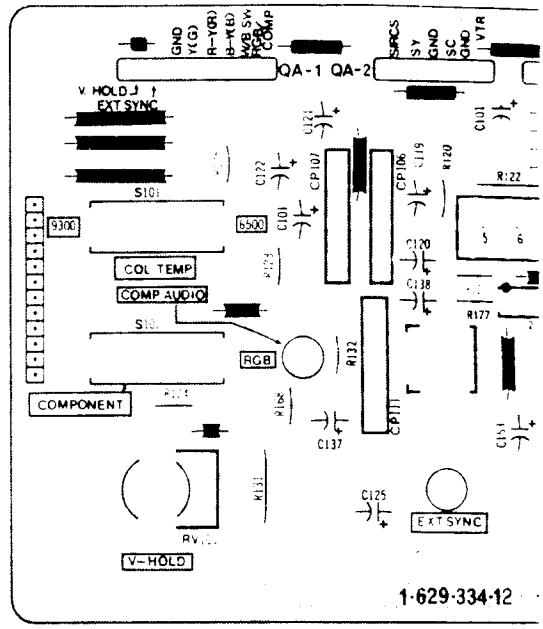
QG BOARD WAVEFORM



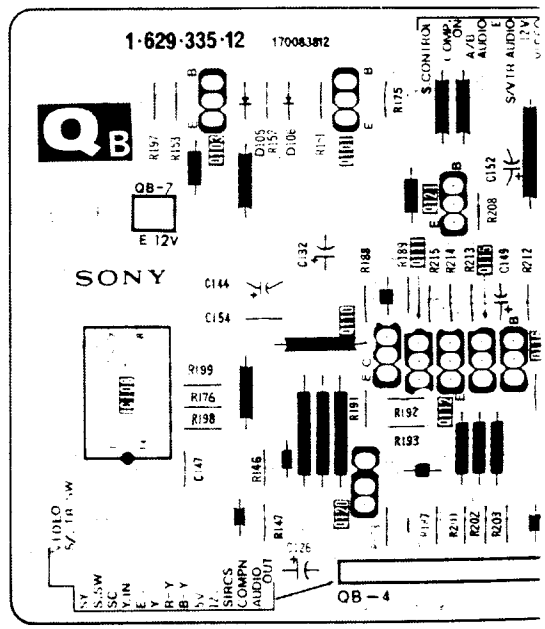
7 | 8 | 9 | 10 | 11

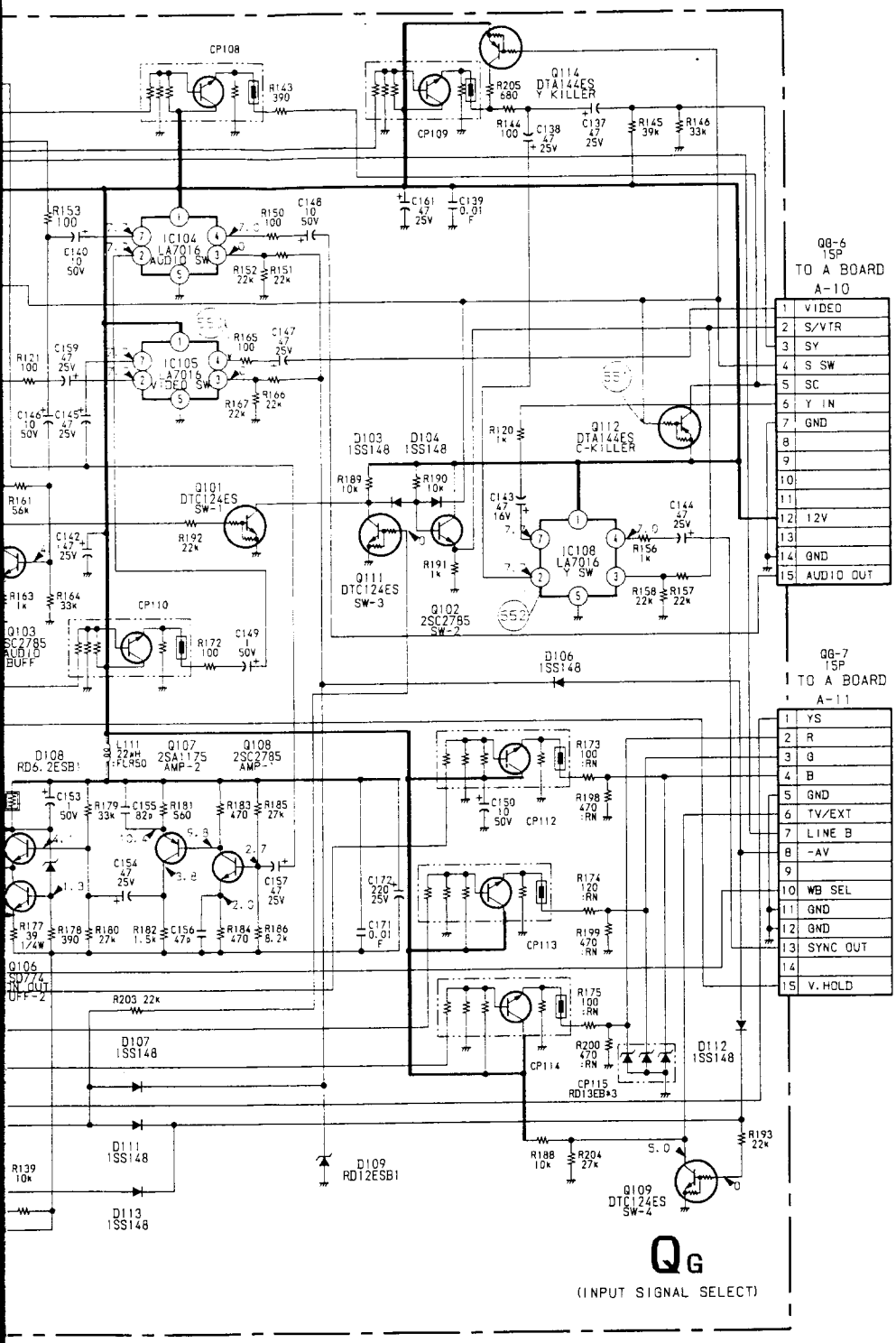
QA

– QA Board – (PVM-1444QM)

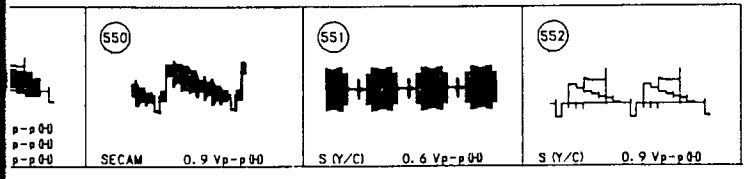


– QB Board – (PVM-1444QM)



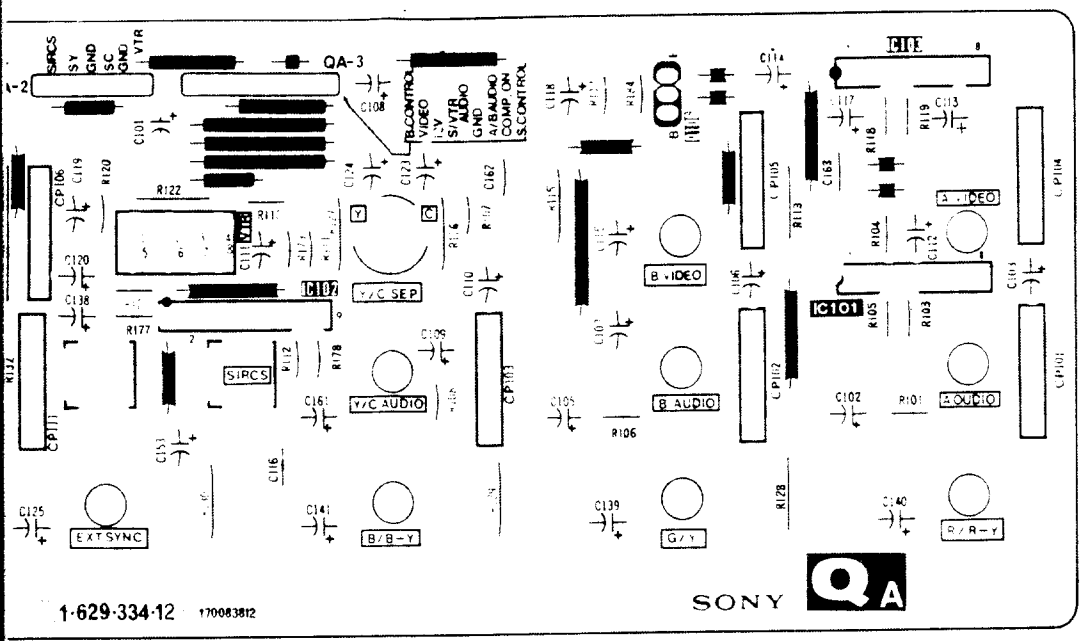


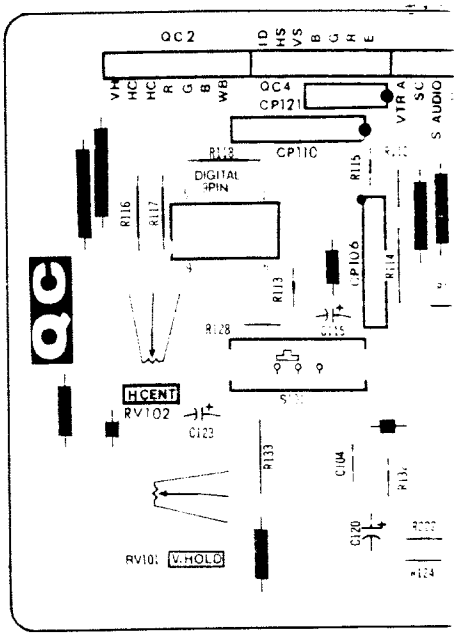
WAVEFORM



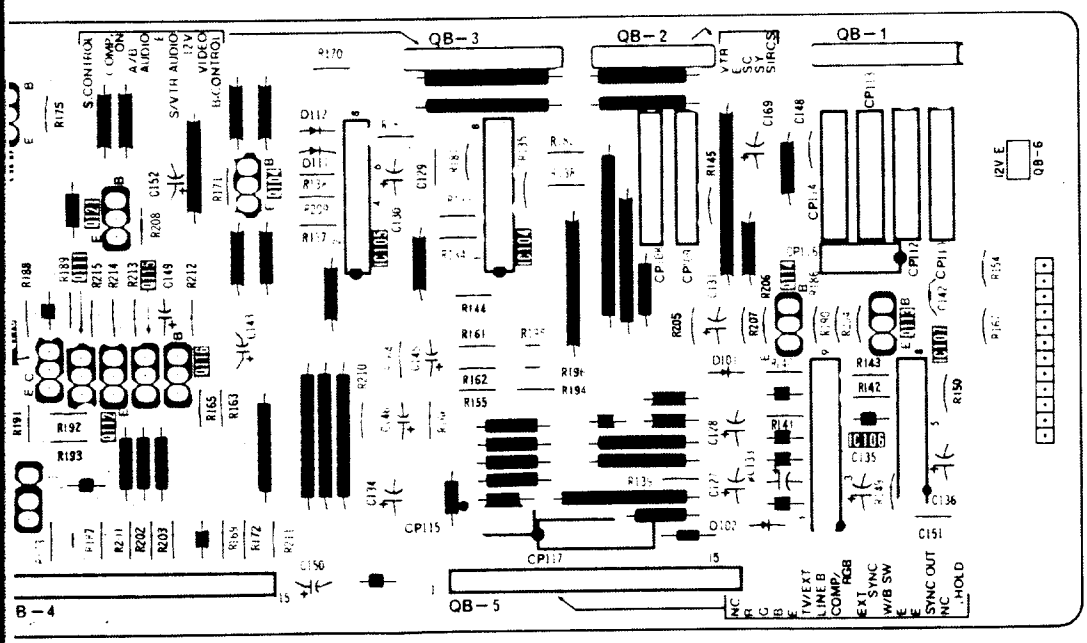
QA [INPUT SIGNAL SELECT] **QB** [INPUT SIGNAL SELECT, SYSTEM SW] **QD** [R·G·B, VIDEO, SYNC SW GATE, H·POSITION] **QE** [AUDIO SW] **Q**

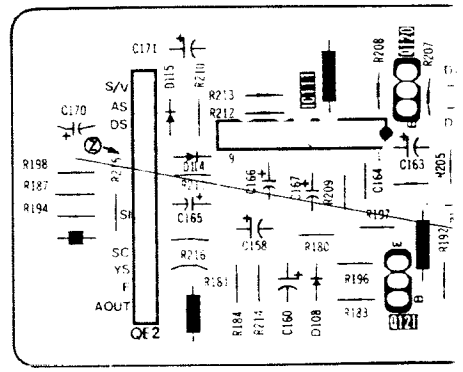
– QC Board – (PVM-1442QM)



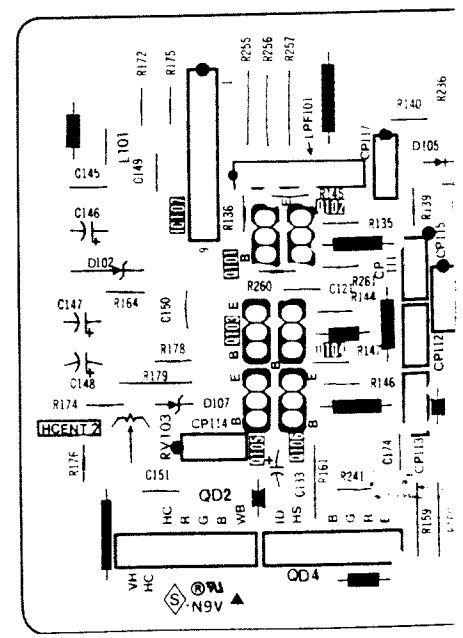


– QE Board – (PVM-1442QM)



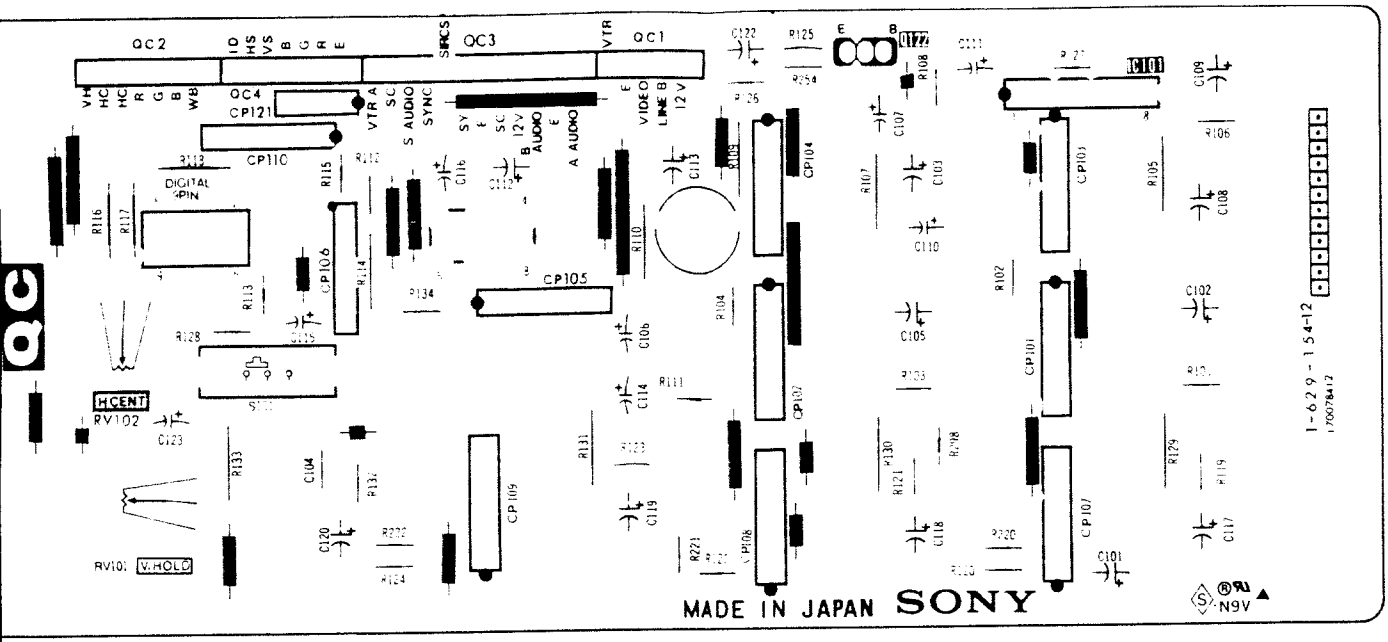


– QD Board – (PVM-1442QM)

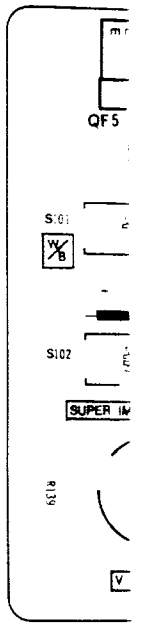


C SW] QE [AUDIO SW] QC [INPUT SIGNAL SELECT] QF [INPUT SIGNAL SELECT] QG [INPUT SIGNAL SELEC

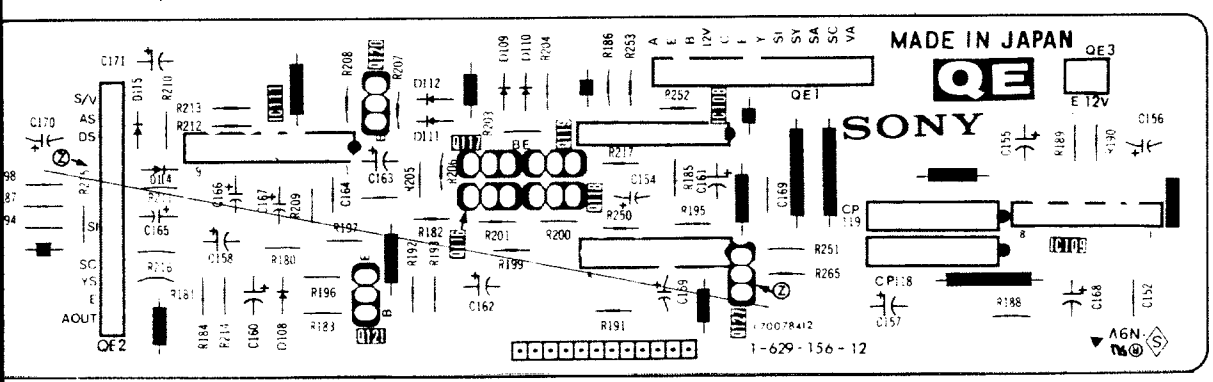
- QC Board – (PVM-1442QM)



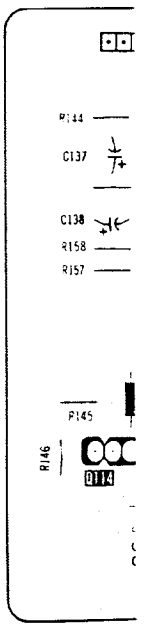
– QF Boa



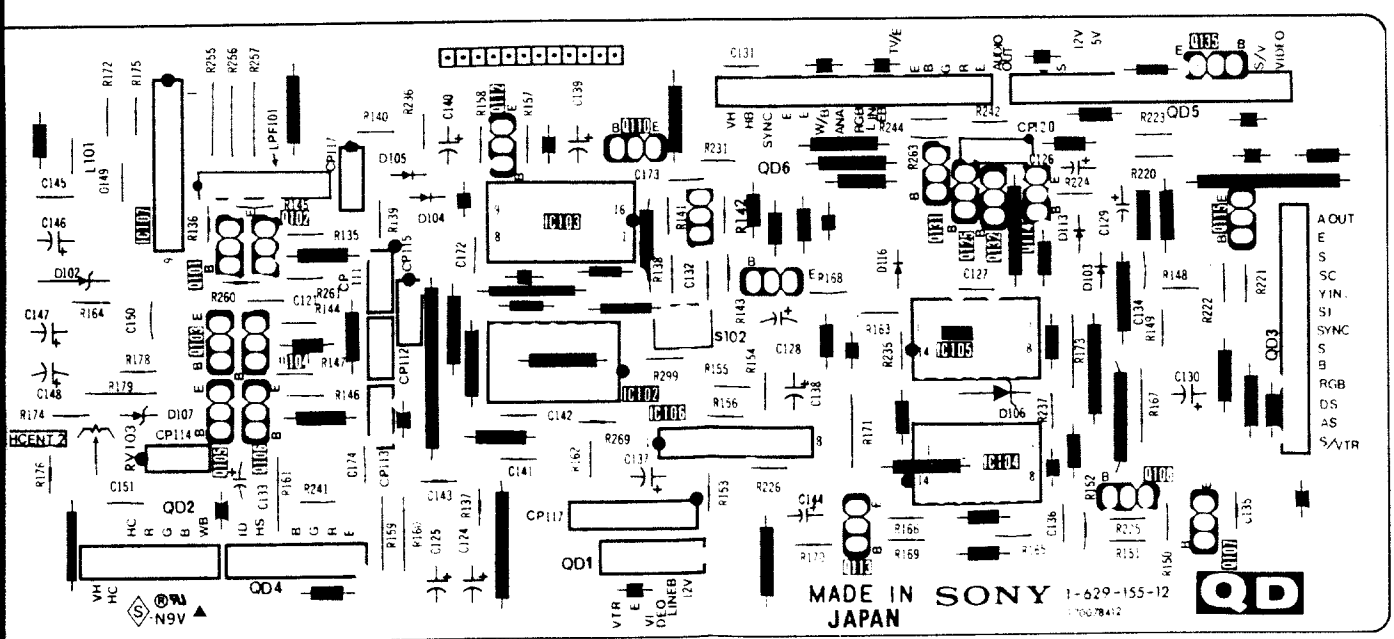
- QE Board – (PVM-1442QM)



– QG Boa

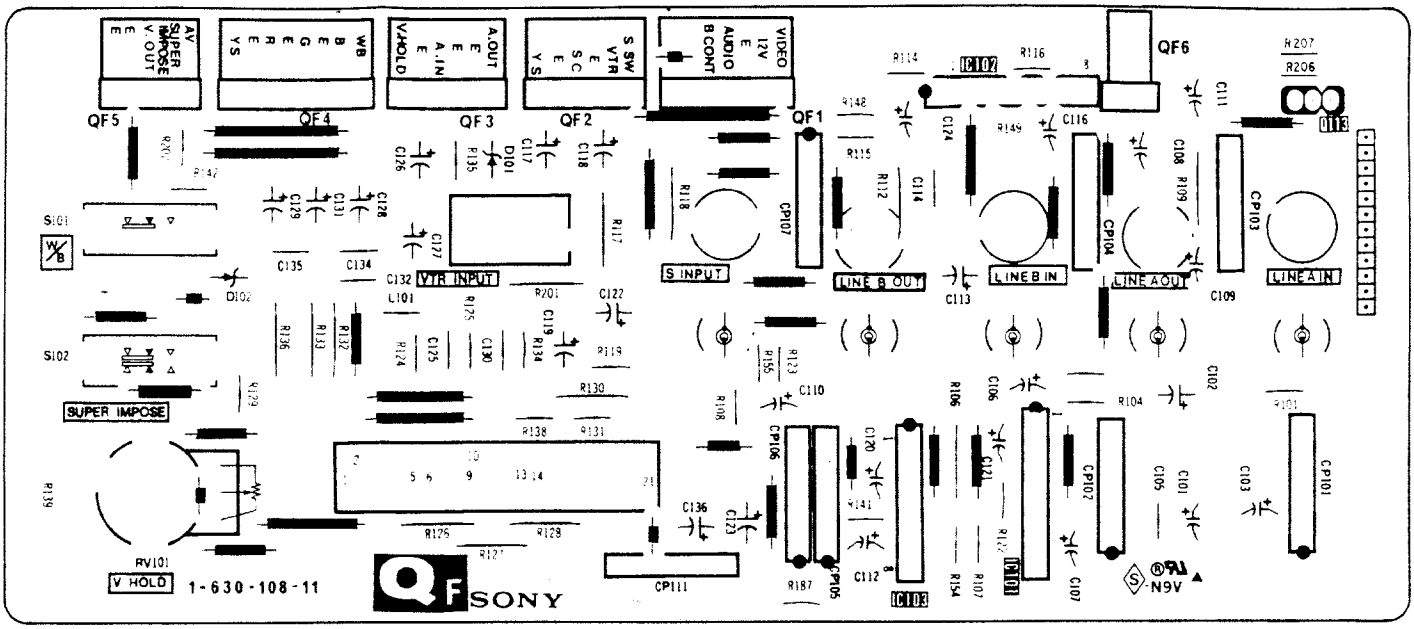


QD Board – (PVM-1442QM)

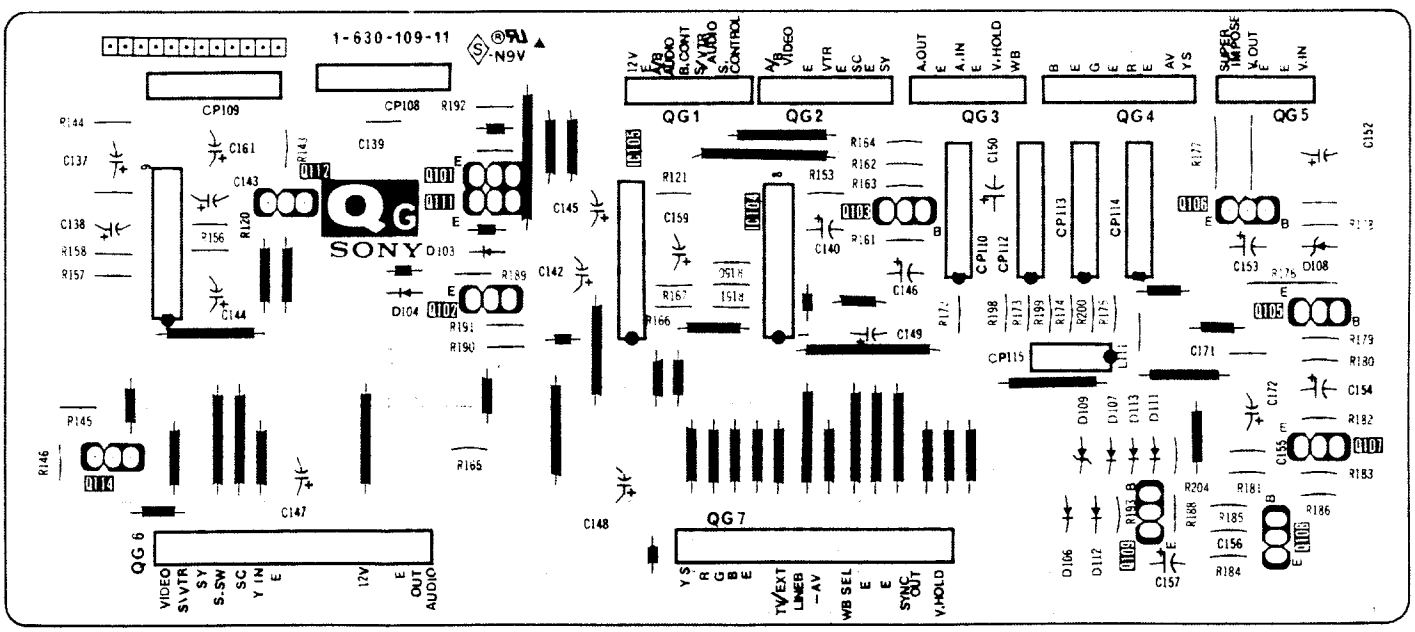


INPUT SIGNAL SELECT]

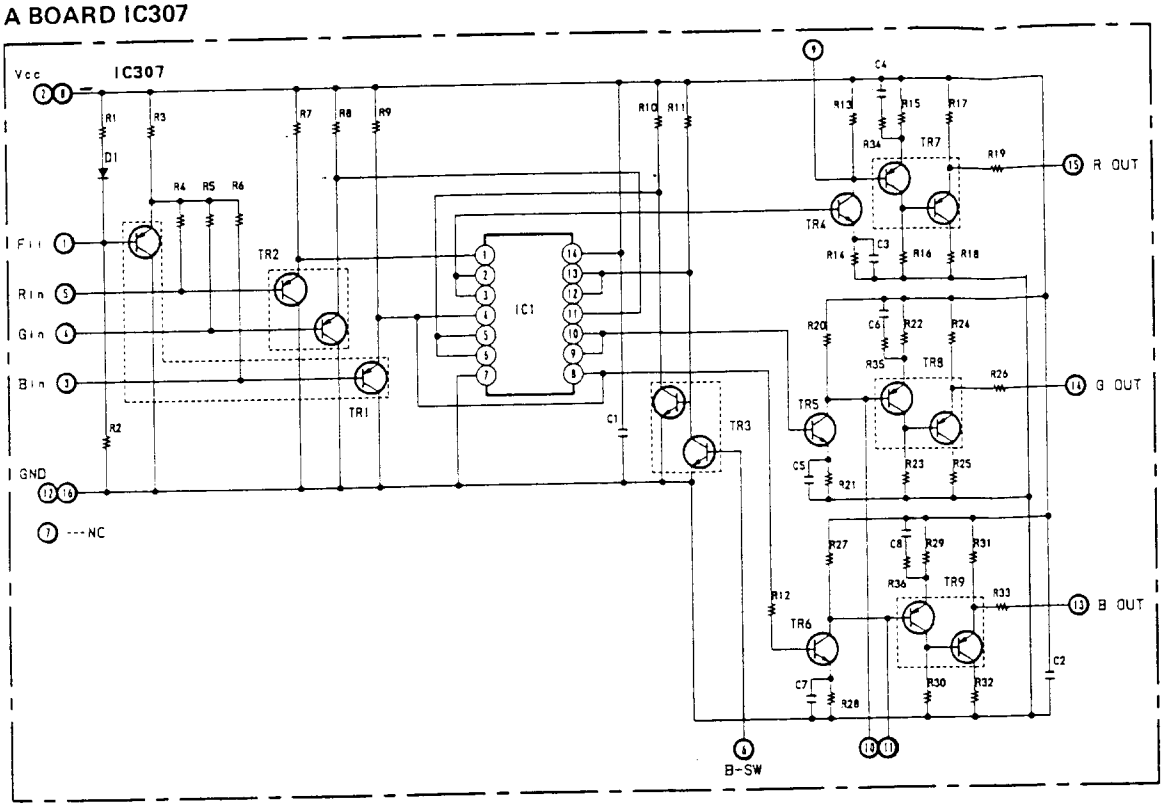
– QF Board – (PVM-1440QM)



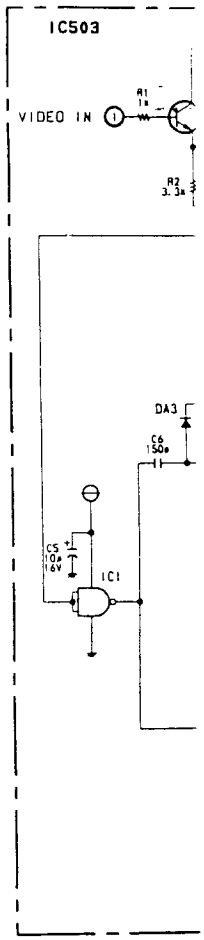
– QG Board – (PVM-1440QM)



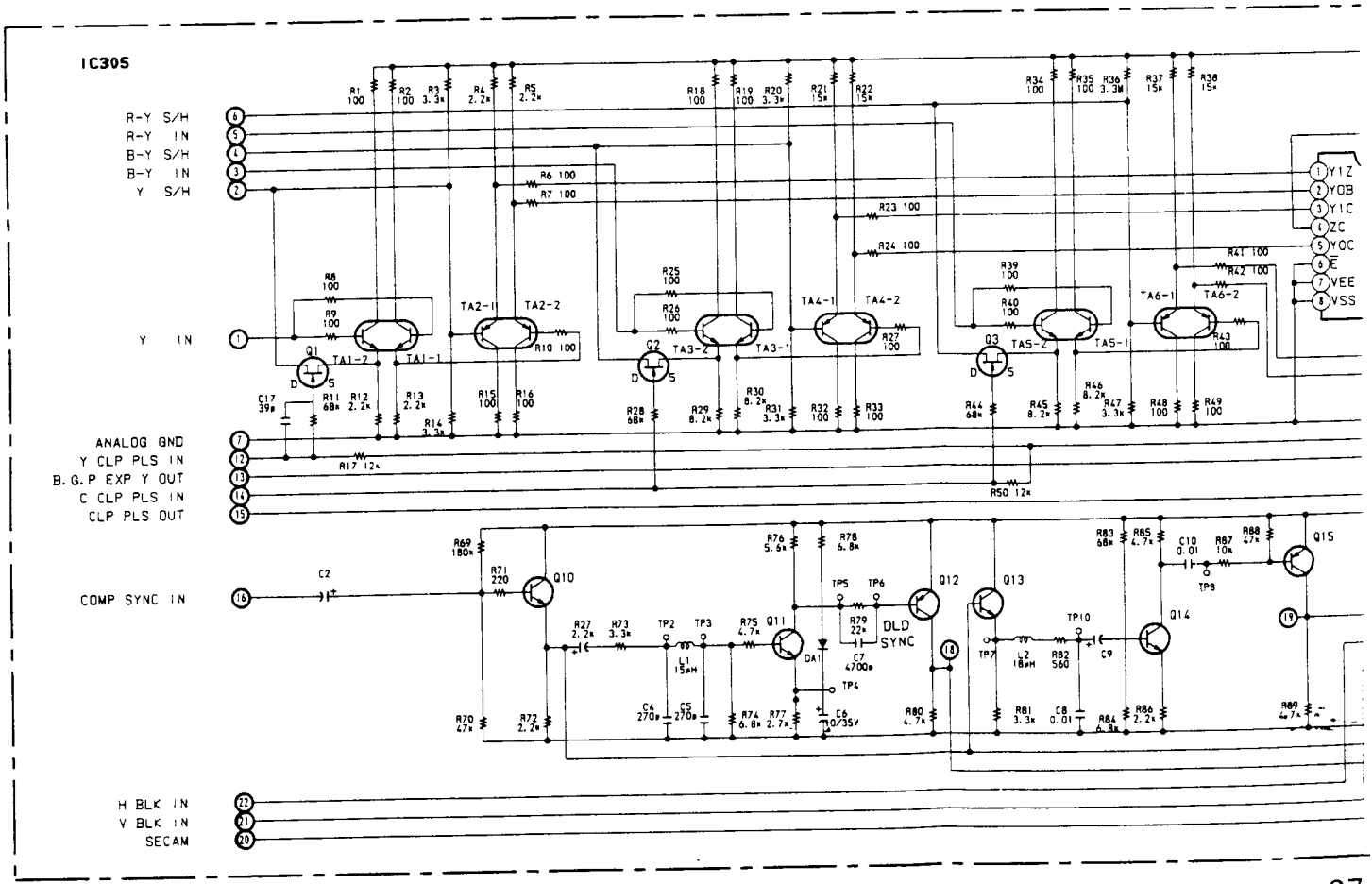
A BOARD IC307



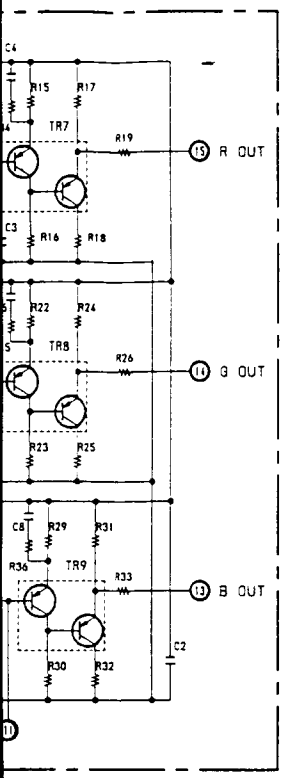
A BOARD IC503

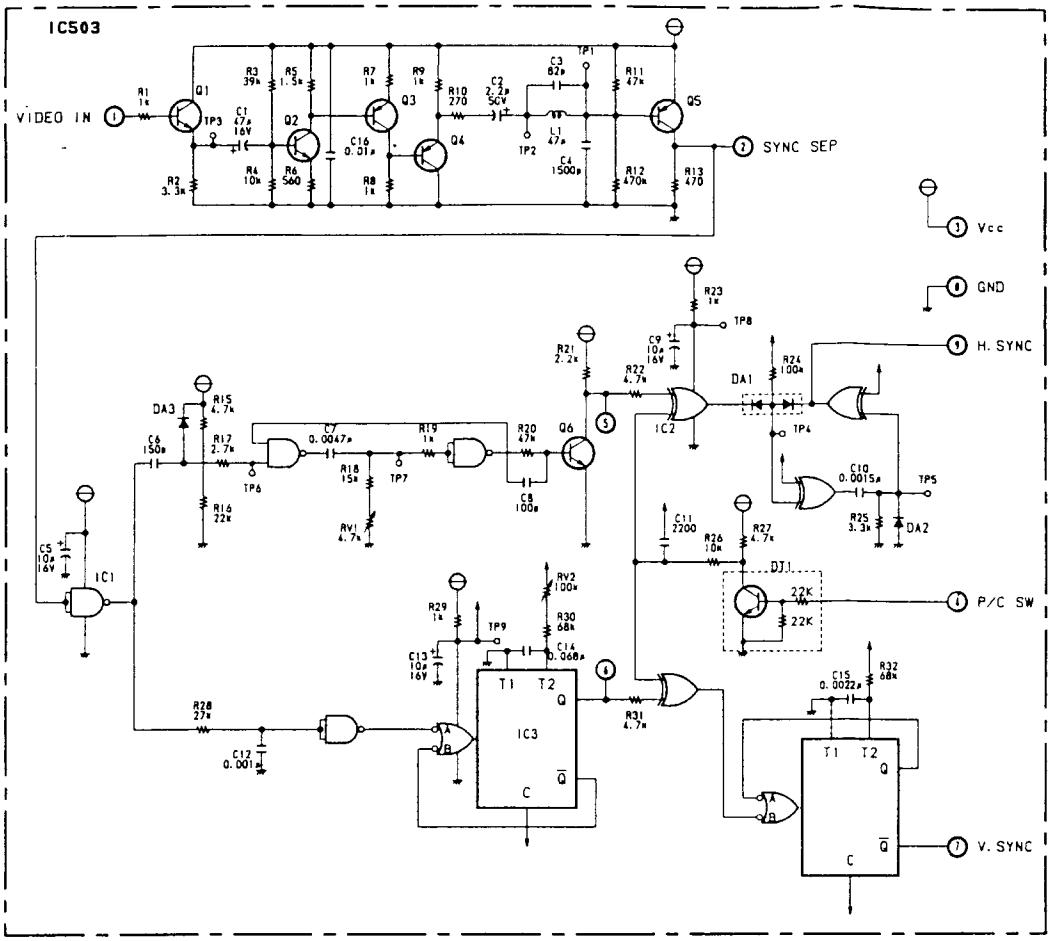


A BOARD IC 305

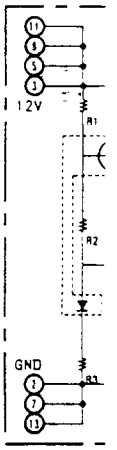


A BOARD IC503



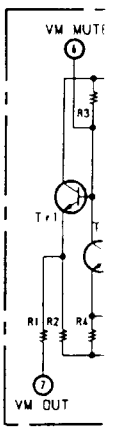


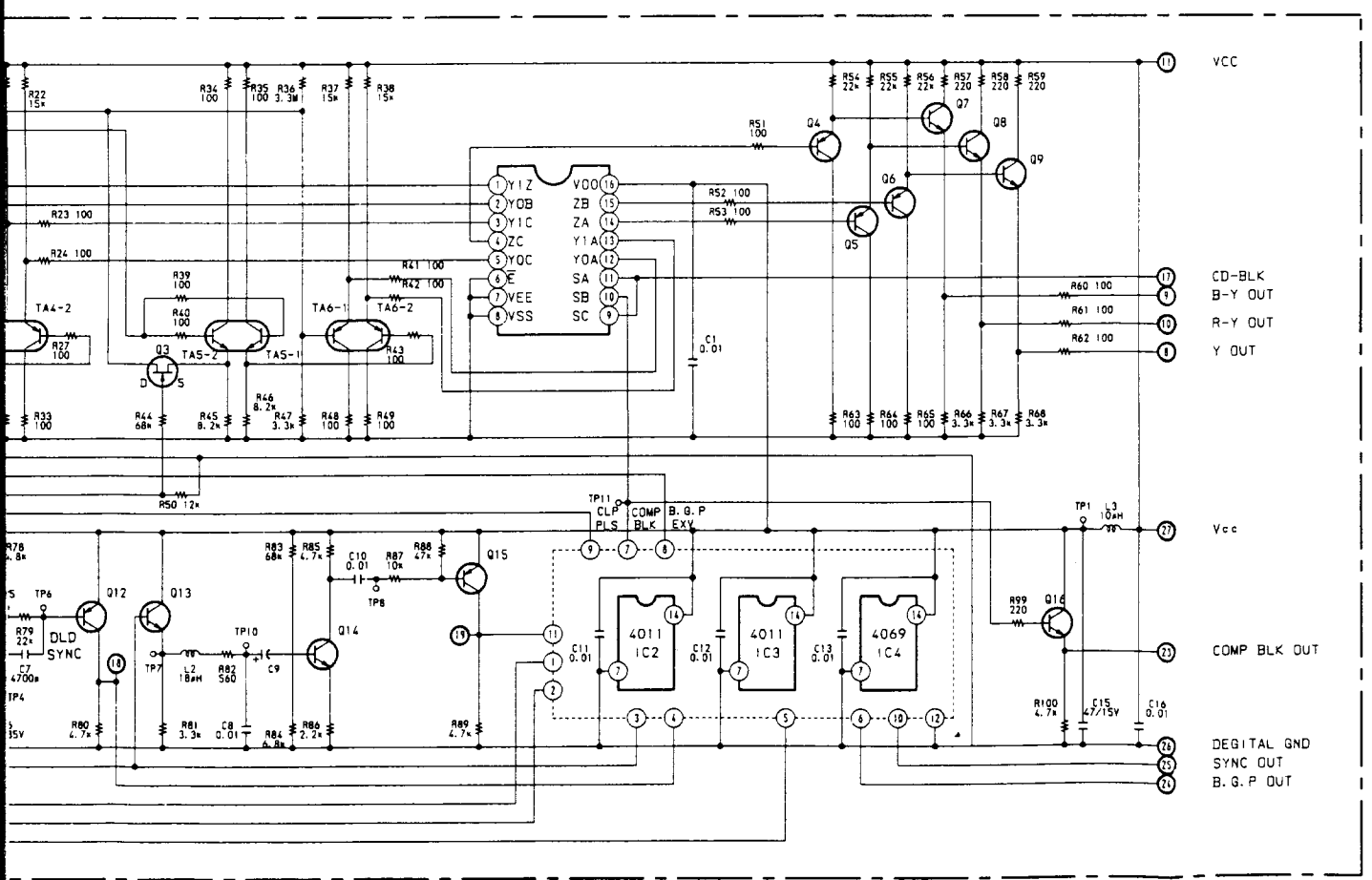
A BOARI



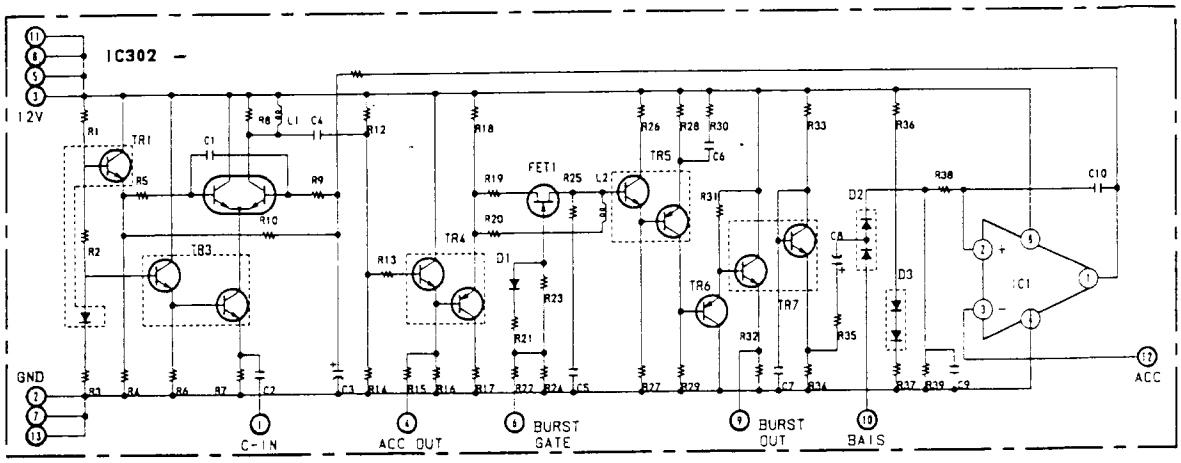
A BOARI

A BOARI

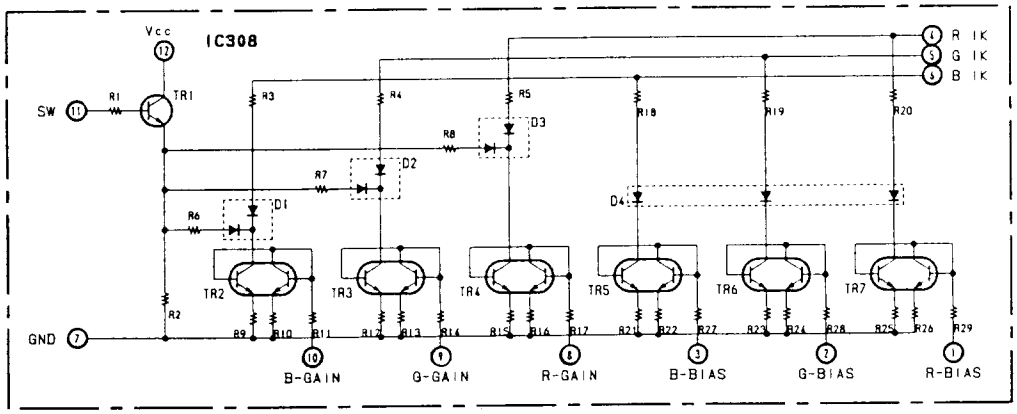




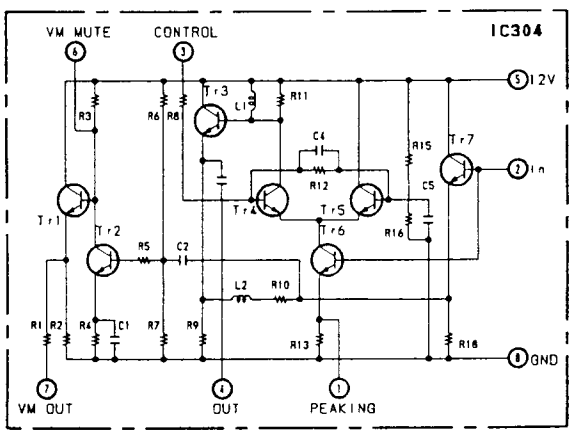
A BOARD IC302



A BOARD IC308

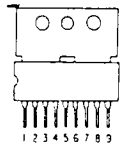


A BOARD IC304



6-6. SEMICONDUCTORS

AN5265



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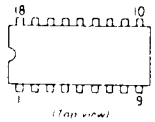
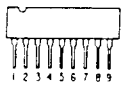


BA236



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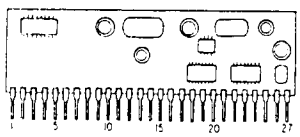

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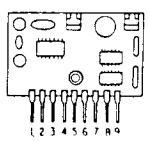
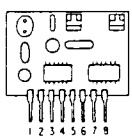
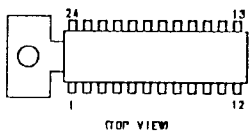


BX-7595



CX-175



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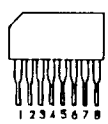

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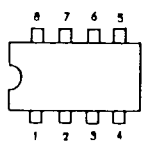

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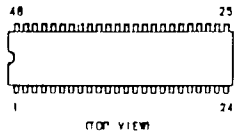
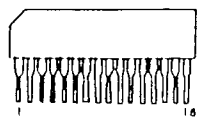


LA7061



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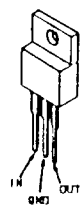

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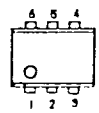
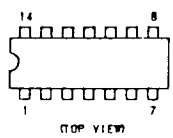
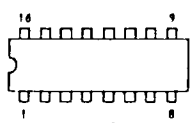


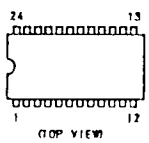
SN74LS09N
SN74LS11N
SN74LS136N
TC4011BP
TC4066BP
UPC1394C



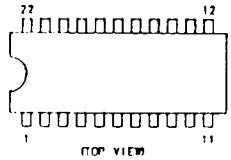
SN74LS138N
TC4052BP
TC4053BP
TC4538BP



TA7193P



UPC1377C



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DTA144ES
DTC124ES-TP
DTC144ES-TP

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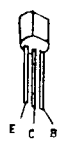
2SC1890A-ETZ

2SC2551-R



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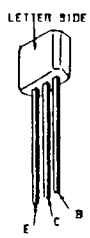
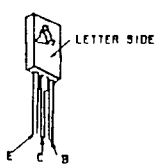
2SA1175TP-HFE
2SC2785TP-F
2SC2785TP-HFE



2SA1220A-P
2SA1220A-Q
2SC2611
2SC2688-K
2SC2690A-Q



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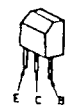
2SD773-T-4
2SD774-T-3



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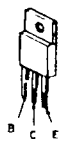
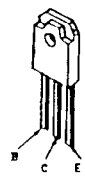
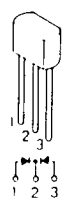


2SD1397-CA



2SK105A-40

DAN209S-TP



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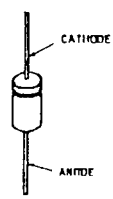
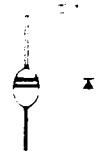
RGP10D
RGP15D
1SS83



ERC26-15
V11N



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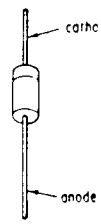

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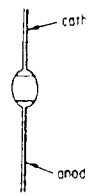
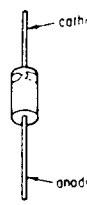
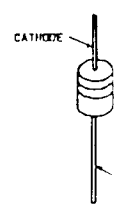


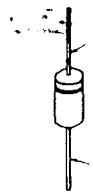
RD5.6EB7



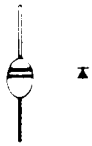
RD5.1ES-
RD5.6ES-
RD6.2ES-
RD6.8ES-
RD8.2ES-
RD10ES-T
RD10ES-T
RD13ES-T
RD15ES-T
RD16ES-T
RD39ES-T



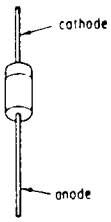
RD-6.8EB-
RD16EB3T
RD24EB27
10E2-TA2E



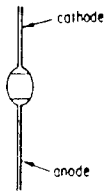
ERC26-15S
V11N



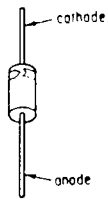
GP08D



RD4.3ES-T1L2



RD5.6EBZ75TN



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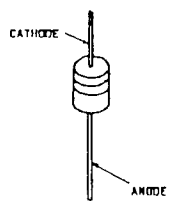
RD5.6ES-T1L1
RD6.2ES-T1B2
RD6.8ES-T1B2
RD8.2ES-T1B2
RD10ES-T1B1
RD10ES-T1L3
RD13ES-T1B3
RD15ES-T1B2
RD16ES-T1B3
RD39ES-T1B4



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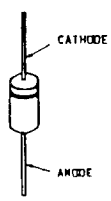
RD16EB3TN
RD24EB27TN
10E2-TA2B



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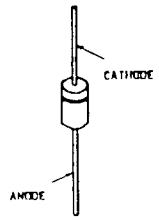
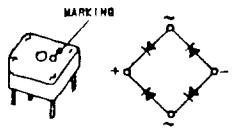
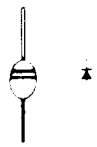
RU2AM
SIB01-06
SIB01-04TP1



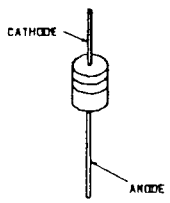
S3WB60Z



V19E



1SS148
1SS148-TP7



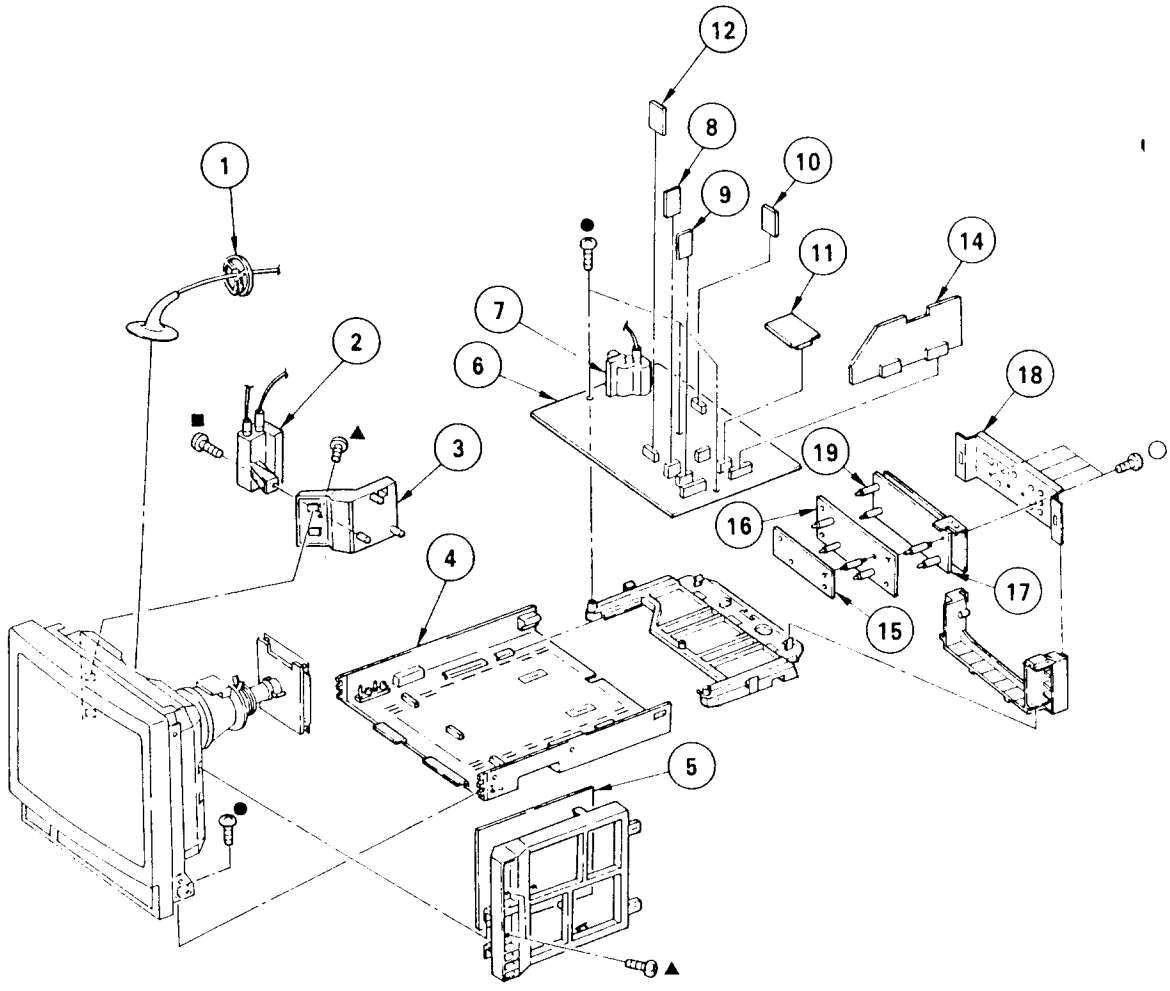
SECTION 7
EXPLODED VIEWS

NOTE:
- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked " ★ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

7-1. CHASSIS

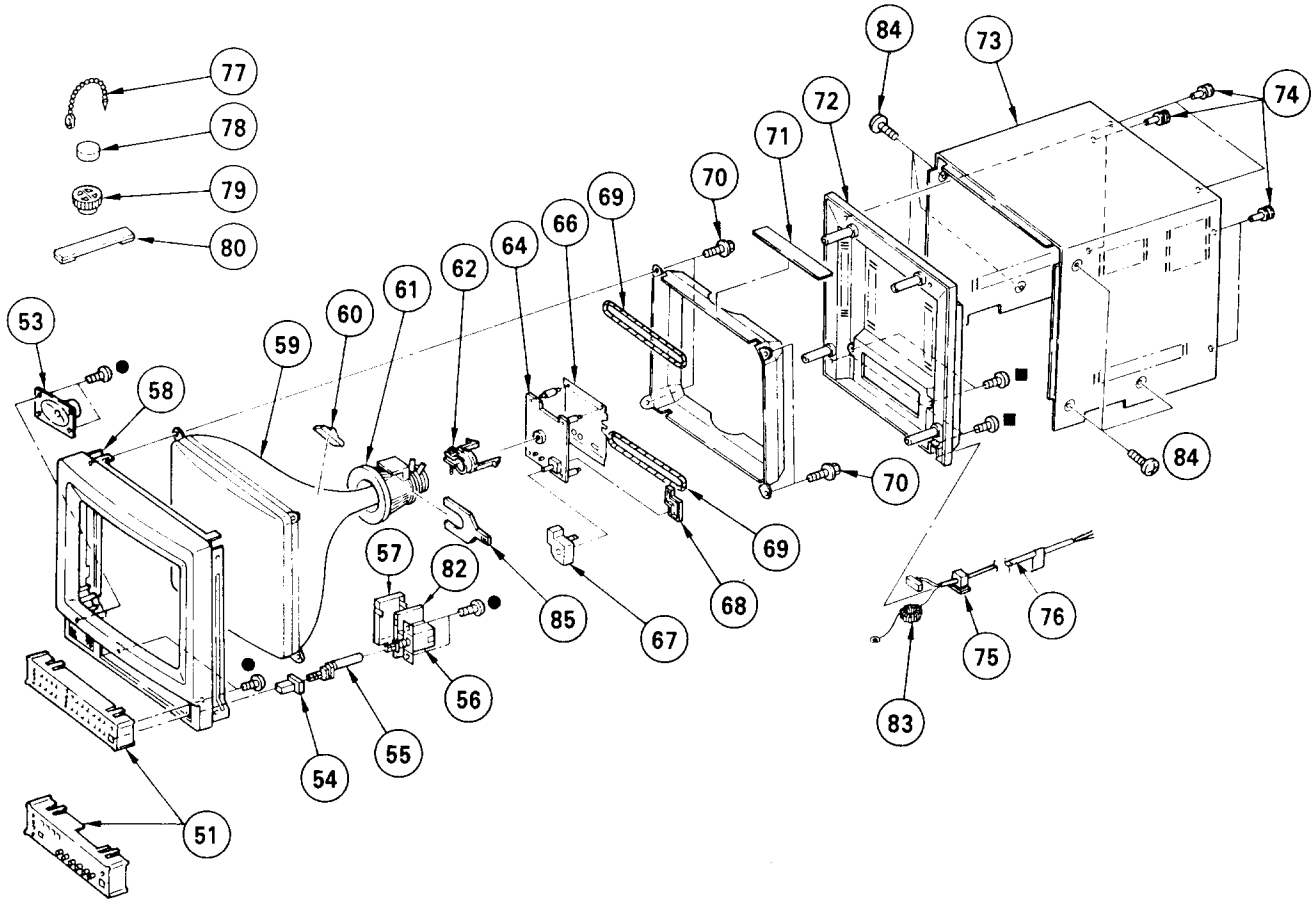
● : BVTP3 x 12 7-685-648-79
■ : BVTP4 x 16 7-685-663-79
▲ : BVTT4 x 8 7-682-561-04
○ : BVTP3 x 8 7-685-646-79



REF.NO.	PART NO.	DESCRIPTION	REMARK
1	⚠*3-704-372-01	HOLDER, HV CABLE	
2	⚠1-237-614-12	RESISTOR ASSY, HIGH-VOLTAGE	
3	*4-391-842-01	BRACKET, HVR	
4	X-4391-805-1	CABINET ASSY, BOTTOM	
5	*A-1245-456-A	FE BOARD, COMPLETE	
6	*A-1296-520-A	A BOARD, COMPLETE	
7	⚠1-439-395-12	TRANSFORMER ASSY, FLYBACK	
8	*1-629-149-11	W BOARD	
9	*1-629-151-11	XA BOARD	
10	*1-629-150-11	Y BOARD	
11	*1-629-148-11	V BOARD	
12	*1-629-219-11	U BOARD (PVM-1440QM ONLY)	
14	*A-1135-564-A	BA BOARD, COMPLETE (PVM-1440QM ONLY)	
	*A-1135-573-A	BA BOARD, COMPLETE (PVM-1442QM/1444QM ONLY)	
15	*A-1270-249-A	QE BOARD, COMPLETE (PVM-1442QM ONLY)	
16	*A-1270-267-A	QG BOARD, COMPLETE (PVM-1440QM ONLY)	
	*A-1270-248-A	QD BOARD, COMPLETE (PVM-1442QM ONLY)	
	*A-1270-246-A	QB BOARD, COMPLETE (PVM-1444QM ONLY)	
17	*A-1270-266-A	QF BOARD, COMPLETE (PVM-1440QM ONLY)	
	*A-1270-247-A	QC BOARD, COMPLETE (PVM-1442QM ONLY)	
	*A-1270-245-A	QA BOARD, COMPLETE (PVM-1444QM ONLY)	
18	4-391-843-32	PLATE, TERMINAL (PVM-1440QM ONLY)	
	4-391-843-12	PLATE, TERMINAL (PVM-1442QM ONLY)	
	4-391-843-02	PLATE, TERMINAL (PVM-1444QM ONLY)	
19	*3-682-419-01	HOLDER, P.C.B	

7-2. PICTURE TUBE

● : BVTP3 x 12 7-685-648-79
■ : BVTP4 x 16 7-685-663-79



The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

REF.NO.	PART NO.	DESCRIPTION	REMARK
51	1-466-113-11	CONTROL UNIT (PVM-1440QM ONLY)	
	1-466-076-11	CONTROL UNIT (PVM-1442QM ONLY)	
	1-466-075-11	CONTROL UNIT (PVM-1444QM ONLY)	
53	1-544-063-11	SPEAKER	
54	4-374-839-11	BUTTON (A)	
55	4-391-824-01	JOINT	
56	⚠1-554-967-12	SWITCH, PUSH (AC POWER)(1 KEY)	
57	*4-391-820-01	COVER, AC SWITCH	
58	X-4391-804-1	BEZEL ASSY (PVM-1442QM/44QM ONLY)	
	X-4391-804-2	BEZEL ASSY (PVM-1440QM ONLY)	
59	⚠8-736-254-05	PICTURE TUBE (A34JHS10X) (PVM-1440QM ONLY)	
	⚠8-734-621-05	PICTURE TUBE (M34KBE21X) (PVM-1442QM/1444QM ONLY)	
60	3-703-961-01	SPACER, DY	
61	⚠1-451-329-11	DEFLECTION YOKE (Y14FZA)	
62	*4-382-050-01	BAND, C PC BOARD	
64	*A-1330-986-A	C BOARD, COMPLETE	
66	*4-391-835-01	PLATE (C), SHIELD (PVM-1442QM ONLY)	
67	*4-374-912-01	COVER (MAIN), CV VOL	
68	*4-374-913-01	COVER (REAR LID), CV VOL	
69	⚠1-426-145-13	COIL, DEGAUSSING	
70	4-307-249-00	SCREW (5), TAPPING	
71	4-391-833-01	CLOTH, PROTECTION	
72	4-391-839-01	COVER, REAR	
73	X-4391-810-1	COVER ASSY, TOP	
74	4-391-825-01	RIVET, NYLON	
75	⚠*4-364-745-01	BUSHING, AC CORD	
76	⚠1-574-389-12	CORD, POWER	
77	4-308-870-00	CLIP, LEAD WIRE	
78	1-452-032-00	MAGNET, DISK; 10MMφ	
79	1-452-094-00	MAGNET, ROTATABLE DISK; 15MMφ	
80	X-4309-608-0	PERMALLOY ASSY, CONVERGENCE	
82	*1-629-153-11	J BOARD	
83	1-543-604-11	CORE, RING	
84	4-847-802-11	SCREW (OS), CASE, CLAW	
85	1-452-277-00	MAGNET BMC	

SECTION 8
ELECTRICAL PARTS LIST

BA

NOTE:

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

When indicating parts by reference number, please include the board name.

CAPACITORS
- MF : μF, PF : μμF

COILS
- MMH : mH, UH : μH

RESISTORS
- All resistors are in ohms
- F : nonflammable

- ✱ : Selected to yield optimum performance.

REF.NO.	PART NO.	DESCRIPTION			REMARK
	*A-1135-573-A	BA BOARD, COMPLETE (PVM-1442QM / PVM-1444QM ONLY)			
	*A-1135-564-A	BA BOARD, COMPLETE (PVM-1440QM ONLY)			
		<CONNECTOR>			
BA1	*1-565-491-11	CONNECTOR, BOARD TO BOARD 15P			
BA2	*1-565-491-11	CONNECTOR, BOARD TO BOARD 15P			
		<FILTER>			
BPF243	1-236-363-11	FILTER, BAND PASS			
BPF244	1-236-364-11	FILTER, BAND PASS			
		<CAPACITOR>			
C201	1-124-120-11	ELECT	220MF	20%	25V
C202	1-102-125-00	CERAMIC	0.0047MF	10%	50V
C203	1-102-125-00	CERAMIC	0.0047MF	10%	50V
C207	1-124-477-11	ELECT	47MF	20%	25V
C208	1-124-477-11	ELECT	47MF	20%	25V
C209	1-124-477-11	ELECT	47MF	20%	25V
C210	1-124-477-11	ELECT	47MF	20%	25V
C211	1-124-477-11	ELECT	47MF	20%	25V
C212	1-124-477-11	ELECT	47MF	20%	25V
C213	1-124-477-11	ELECT	47MF	20%	25V
C214	1-101-004-00	CERAMIC	0.01MF		50V
C221	1-124-902-00	ELECT	0.47MF	20%	50V
C222	1-124-464-11	ELECT	0.22MF	20%	50V
C223	1-102-959-00	CERAMIC	22PF	5%	50V
C224	1-101-888-00	CERAMIC	68PF	5%	50V
C230	1-124-120-11	ELECT	220MF	20%	25V
C240	1-101-004-00	CERAMIC	0.01MF		50V
C241	1-124-120-11	ELECT	220MF	20%	25V
C242	1-124-478-11	ELECT	100MF	20%	25V
C243	1-124-120-11	ELECT	220MF	20%	25V
C245	1-101-004-00	CERAMIC	0.01MF		50V
C246	1-123-875-11	ELECT	10MF	20%	50V
C247	1-101-004-00	CERAMIC	0.01MF		50V
C248	1-102-125-00	CERAMIC	0.0047MF	10%	50V
C250	1-161-021-11	CERAMIC	0.047MF	10%	25V
C251	1-102-125-00	CERAMIC	0.0047MF	10%	50V
C252	1-102-125-00	CERAMIC	0.0047MF	10%	50V
C253	1-102-125-00	CERAMIC	0.0047MF	10%	50V
C254	1-102-125-00	CERAMIC	0.0047MF	10%	50V
C255	1-101-004-00	CERAMIC	0.01MF		50V
C265	1-102-978-00	CERAMIC	220PF	5%	50V
C266	1-101-003-00	CERAMIC	0.0047MF		50V
C267	1-124-478-11	ELECT	100MF	20%	25V
C268	1-101-003-00	CERAMIC	0.0047MF		50V
C269	1-102-978-00	CERAMIC	220PF	5%	50V
C271	1-101-004-00	CERAMIC	0.01MF		50V
C272	1-101-002-00	CERAMIC	0.0022MF		50V
C273	1-101-002-00	CERAMIC	0.0022MF		50V
C280	1-108-624-11	MYLAR	0.0068MF	10%	100V
C281	1-124-478-11	ELECT	100MF	20%	25V
C292	1-101-004-00	CERAMIC	0.01MF		50V
C401	1-123-875-11	ELECT	10MF	20%	50V
C402	1-101-888-00	CERAMIC	68PF	5%	50V
C403	1-102-116-00	CERAMIC	680PF	10%	50V
C404	1-136-161-00	FILM	0.047MF	5%	50V
C405	1-102-074-00	CERAMIC	0.001MF	10%	50V
C406	1-124-477-11	ELECT	47MF	20%	25V
C407	1-101-890-00	CERAMIC	75PF	5%	50V
C408	1-102-960-00	CERAMIC	27PF	5%	50V
C409	1-136-165-00	FILM	0.1MF	5%	50V
C410	1-136-165-00	FILM	0.1MF	5%	50V
C411	1-136-165-00	FILM	0.1MF	5%	50V
C412	1-102-129-00	CERAMIC	0.01MF	10%	50V
C413	1-124-499-11	ELECT	1MF	20%	50V
C414	1-136-173-00	FILM	0.47MF	5%	50V
C415	1-123-875-11	ELECT	10MF	20%	50V
C416	1-102-118-00	CERAMIC	0.0012MF	10%	50V
C417	1-124-477-11	ELECT	47MF	20%	25V
C418	1-124-499-11	ELECT	1MF	20%	50V
C419	1-124-478-11	ELECT	100MF	20%	25V
C420	1-136-165-00	FILM	0.1MF	5%	50V
C421	1-102-960-00	CERAMIC	27PF	5%	50V
C422	1-136-165-00	FILM	0.1MF	5%	50V
C423	1-123-875-11	ELECT	10MF	20%	50V
C424	1-136-165-00	FILM	0.1MF	5%	50V
C425	1-101-361-00	CERAMIC	150PF	5%	50V
C426	1-101-890-00	CERAMIC	75PF	5%	50V
C427	1-124-120-11	ELECT	220MF	20%	25V
C428	1-124-477-11	ELECT	47MF	20%	25V
C429	1-124-477-11	ELECT	47MF	20%	25V
C430	1-101-004-00	CERAMIC	0.01MF		50V
C431	1-101-884-00	CERAMIC	56PF	5%	50V
C432	1-101-004-00	CERAMIC	0.01MF		50V
C433	1-124-478-11	ELECT	100MF	20%	25V
C434	1-101-884-00	CERAMIC	56PF	5%	50V
C435	1-101-884-00	CERAMIC	56PF	5%	50V
C441	1-102-959-00	CERAMIC	22PF	5%	50V
C442	1-161-021-11	CERAMIC	0.047MF	10%	25V
		<FILTER BLOCK>			
CFM201	1-464-880-11	FILTER BLOCK, COM (CFB-2)			

BA

REF.NO.	PART NO.	DESCRIPTION		REMARK
		<MODULE>		
CTR210	1-236-366-11	MODULE, TRAP		
CTR211	1-236-365-11	MODULE, TRAP		
PCM290	1-808-628-11	MODULE, PHASE PHM-1		
SEP270	1-808-654-11	MODULE		
		<DIODE>		
D210	8-719-911-19	DIODE 1SS119		
D211	8-719-911-19	DIODE 1SS119		
D212	8-719-911-19	DIODE 1SS119		
D240	8-719-110-16	DIODE RD10ES-B1		
D280	8-719-911-19	DIODE 1SS119		
D401	8-719-911-19	DIODE 1SS119		
D402	8-719-911-19	DIODE 1SS119		
		<DELAY LINE>		
DL230	1-415-632-11	DELAY LINE, Y		
		<IC>		
FPG280	8-749-920-73	IC BX7595		
IC201	8-759-800-81	IC LA7016		
IC210	8-759-240-53	IC TC4053BP		
IC250	8-759-800-81	IC LA7016		
IC260	8-759-208-14	IC TC4066BPHB		
IC261	8-759-208-14	IC TC4066BPHB		
IC401	8-751-750-00	IC CX-175		
		<COIL>		
L280	1-410-509-11	INDUCTOR	10UH	
L282	1-410-470-11	INDUCTOR	10UH	
L401	1-410-087-31	INDUCTOR	10MMH	
L402	1-408-411-00	INDUCTOR	15UH	
L403	1-404-496-00	COIL		
L404	1-408-411-00	INDUCTOR	15UH	
L405	1-404-496-00	COIL		
L406	1-410-470-11	INDUCTOR	10UH	
L408	1-410-336-11	INDUCTOR	220UH	
		<TRANSISTOR>		
Q201	8-729-119-78	TRANSISTOR 2SC2785-HFE		
Q210	8-729-119-78	TRANSISTOR 2SC2785-HFE		
Q211	8-729-119-76	TRANSISTOR 2SA1175-HFE		
Q212	8-729-900-89	TRANSISTOR DTC144ES		
Q213	8-729-900-89	TRANSISTOR DTC144ES		
Q214	8-729-119-78	TRANSISTOR 2SC2785-HFE		
Q221	8-729-900-89	TRANSISTOR DTC144ES		
Q222	8-729-900-63	TRANSISTOR DTA124ES		
Q230	8-729-119-78	TRANSISTOR 2SC2785-HFE		
Q231	8-729-119-78	TRANSISTOR 2SC2785-HFE		
Q232	8-729-119-78	TRANSISTOR 2SC2785-HFE		
Q233	8-729-119-76	TRANSISTOR 2SA1175-HFE		
Q234	8-729-119-78	TRANSISTOR 2SC2785-HFE		
Q240	8-729-177-42	TRANSISTOR 2SD774-3		
Q241	8-729-119-78	TRANSISTOR 2SC2785-HFE		
Q242	8-729-119-78	TRANSISTOR 2SC2785-HFE		
Q243	8-729-119-78	TRANSISTOR 2SC2785-HFE		
Q258	8-729-119-78	TRANSISTOR 2SC2785-HFE		
Q259	8-729-119-78	TRANSISTOR 2SC2785-HFE		
Q260	8-729-900-89	TRANSISTOR DTC144ES		
Q261	8-729-119-78	TRANSISTOR 2SC2785-HFE		
Q262	8-729-119-78	TRANSISTOR 2SC2785-HFE		
Q263	8-729-119-78	TRANSISTOR 2SC2785-HFE		
Q264	8-729-119-76	TRANSISTOR 2SA1175-HFE		
Q265	8-729-119-78	TRANSISTOR 2SC2785-HFE		
Q280	8-729-900-89	TRANSISTOR DTC144ES		
Q401	8-729-119-78	TRANSISTOR 2SC2785-HFE		
Q402	8-729-119-78	TRANSISTOR 2SC2785-HFE		
Q403	8-729-119-78	TRANSISTOR 2SC2785-HFE		
Q404	8-729-119-78	TRANSISTOR 2SC2785-HFE		
Q405	8-729-900-63	TRANSISTOR DTA124ES		
Q406	8-729-119-78	TRANSISTOR 2SC2785-HFE		
Q407	8-729-119-78	TRANSISTOR 2SC2785-HFE		
Q408	8-729-119-78	TRANSISTOR 2SC2785-HFE		
Q409	8-729-119-78	TRANSISTOR 2SC2785-HFE		
Q410	8-729-119-78	TRANSISTOR 2SC2785-HFE		
Q411	8-729-119-76	TRANSISTOR 2SA1175-HFE		
		<RESISTOR>		
JW95	1-249-411-11	CARBON	330 5% 1/4W	
R201	1-249-435-11	CARBON	33K 5% 1/4W	
R202	1-249-435-11	CARBON	33K 5% 1/4W	
R203	1-249-405-11	CARBON	100 5% 1/4W	
R204	1-249-421-11	CARBON	2.2K 5% 1/4W	
R205	1-249-433-11	CARBON	22K 5% 1/4W	
R206	1-249-432-11	CARBON	18K 5% 1/4W	
R207	1-249-409-11	CARBON	220 5% 1/4W	
R210	1-249-437-11	CARBON	47K 5% 1/4W	
R211	1-249-437-11	CARBON	47K 5% 1/4W	
R212	1-249-437-11	CARBON	47K 5% 1/4W	
R213	1-249-429-11	CARBON	10K 5% 1/4W	
R214	1-249-433-11	CARBON	22K 5% 1/4W	
R215	1-249-437-11	CARBON	47K 5% 1/4W	
R216	1-249-429-11	CARBON	10K 5% 1/4W	
R217	1-249-429-11	CARBON	10K 5% 1/4W	
R218	1-249-425-11	CARBON	4.7K 5% 1/4W	
R219	1-249-405-11	CARBON	100 5% 1/4W	
R220	1-249-428-11	CARBON	8.2K 5% 1/4W	
R221	1-249-423-11	CARBON	3.3K 5% 1/4W	
R222	1-249-439-11	CARBON	68K 5% 1/4W	
R224	1-249-439-11	CARBON	68K 5% 1/4W	
R225	1-249-439-11	CARBON	68K 5% 1/4W	
R226	1-249-439-11	CARBON	68K 5% 1/4W	
R227	1-249-386-11	CARBON	2.7 5% 1/4W	F
R228	1-249-433-11	CARBON	22K 5% 1/4W	
R229	1-249-433-11	CARBON	22K 5% 1/4W	
R230	1-249-429-11	CARBON	10K 5% 1/4W	
R231	1-249-422-11	CARBON	2.7K 5% 1/4W	
R232	1-249-415-11	CARBON	680 5% 1/4W	
R233	1-249-415-11	CARBON	680 5% 1/4W	
R234	1-249-411-11	CARBON	330 5% 1/4W	
R235	1-249-416-11	CARBON	820 5% 1/4W	
R236	1-249-411-11	CARBON	330 5% 1/4W	
R237	1-249-411-11	CARBON	330 5% 1/4W	
R238	1-249-405-11	CARBON	100 5% 1/4W	
R239	1-249-417-11	CARBON	1K 5% 1/4W	
R240	1-249-407-11	CARBON	150 5% 1/4W	
R241	1-247-895-00	CARBON	470K 5% 1/4W	
R242	1-249-421-11	CARBON	2.2K 5% 1/4W	
R243	1-249-435-11	CARBON	33K 5% 1/4W	
R244	1-249-435-11	CARBON	33K 5% 1/4W	
R245	1-249-422-11	CARBON	2.7K 5% 1/4W	

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

BA FE

REF.NO.	PART NO.	DESCRIPTION				REMARK
R246	1-249-435-11	CARBON	33K	5%	1/4W	
R247	1-249-435-11	CARBON	33K	5%	1/4W	
R248	1-249-422-11	CARBON	2.7K	5%	1/4W	
R249	1-249-432-11	CARBON	18K	5%	1/4W	
R250	1-249-405-11	CARBON	100	5%	1/4W	
R251	1-249-433-11	CARBON	22K	5%	1/4W	
R252	1-249-421-11	CARBON	2.2K	5%	1/4W	
R253	1-249-415-11	CARBON	680	5%	1/4W	
R254	1-249-420-11	CARBON	1.8K	5%	1/4W	
R255	1-249-417-11	CARBON	1K	5%	1/4W	
R256	1-249-405-11	CARBON	100	5%	1/4W	
R257	1-249-417-11	CARBON	1K	5%	1/4W	
R258	1-249-405-11	CARBON	100	5%	1/4W	
R259	1-249-441-11	CARBON	100K	5%	1/4W	
R260	1-249-425-11	CARBON	4.7K	5%	1/4W	
R261	1-247-891-00	CARBON	330K	5%	1/4W	
R262	1-249-435-11	CARBON	33K	5%	1/4W	
R263	1-249-422-11	CARBON	2.7K	5%	1/4W	
R264	1-249-422-11	CARBON	2.7K	5%	1/4W	
R268	1-249-417-11	CARBON	1K	5%	1/4W	
R270	1-249-417-11	CARBON	1K	5%	1/4W	
R271	1-249-417-11	CARBON	1K	5%	1/4W	
R272	1-249-417-11	CARBON	1K	5%	1/4W	
R273	1-249-426-11	CARBON	5.6K	5%	1/4W	
R274	1-249-429-11	CARBON	10K	5%	1/4W	
R275	1-249-413-11	CARBON	470	5%	1/4W	
R276	1-249-417-11	CARBON	1K	5%	1/4W	
R277	1-247-891-00	CARBON	330K	5%	1/4W	
R278	1-247-891-00	CARBON	330K	5%	1/4W	
R279	1-249-429-11	CARBON	10K	5%	1/4W	
R280	1-249-429-11	CARBON	10K	5%	1/4W	
R281	1-249-429-11	CARBON	10K	5%	1/4W	
R282	1-249-429-11	CARBON	10K	5%	1/4W	
R283	1-249-429-11	CARBON	10K	5%	1/4W	
R284	1-249-429-11	CARBON	10K	5%	1/4W	
R285	1-249-429-11	CARBON	10K	5%	1/4W	
R290	1-249-441-11	CARBON	100K	5%	1/4W	
R291	1-249-413-11	CARBON	470	5%	1/4W	
R292	1-249-435-11	CARBON	33K	5%	1/4W	
R293	1-249-435-11	CARBON	33K	5%	1/4W	
R294	1-249-405-11	CARBON	100	5%	1/4W	
R295	1-249-405-11	CARBON	100	5%	1/4W	
R296	1-249-405-11	CARBON	100	5%	1/4W	
R297	1-249-405-11	CARBON	100	5%	1/4W	
R299	1-249-429-11	CARBON	10K	5%	1/4W	
R401	1-249-419-11	CARBON	1.5K	5%	1/4W	
R403	1-247-881-00	CARBON	120K	5%	1/4W	
R405	1-215-429-00	METAL	2.2K	1%	1/6W	
R406	1-249-429-11	CARBON	10K	5%	1/4W	
R407	1-249-422-11	CARBON	2.7K	5%	1/4W	
R408	1-249-414-11	CARBON	560	5%	1/4W	
R409	1-249-421-11	CARBON	2.2K	5%	1/4W	
R410	1-249-419-11	CARBON	1.5K	5%	1/4W	
R411	1-249-419-11	CARBON	1.5K	5%	1/4W	
R412	1-249-423-11	CARBON	3.3K	5%	1/4W	
R413	1-249-434-11	CARBON	27K	5%	1/4W	
R414	1-247-895-00	CARBON	470K	5%	1/4W	
R415	1-249-412-11	CARBON	390	5%	1/4W	
R416	1-249-415-11	CARBON	680	5%	1/4W	
R417	1-249-409-11	CARBON	220	5%	1/4W	
R418	1-249-425-11	CARBON	4.7K	5%	1/4W	
R419	1-249-433-11	CARBON	22K	5%	1/4W	
R420	1-215-432-00	METAL	3K	1%	1/6W	
R421	1-249-419-11	CARBON	1.5K	5%	1/4W	
R422	1-249-419-11	CARBON	1.5K	5%	1/4W	
R423	1-249-421-11	CARBON	2.2K	5%	1/4W	
R424	1-249-429-11	CARBON	10K	5%	1/4W	
R425	1-249-414-11	CARBON	560	5%	1/4W	
R426	1-249-422-11	CARBON	2.7K	5%	1/4W	
R427	1-249-423-11	CARBON	3.3K	5%	1/4W	
R428	1-249-412-11	CARBON	390	5%	1/4W	
R429	1-249-425-11	CARBON	4.7K	5%	1/4W	
R430	1-249-408-11	CARBON	180	5%	1/4W	
R431	1-249-411-11	CARBON	330	5%	1/4W	
R432	1-249-422-11	CARBON	2.7K	5%	1/4W	
R433	1-249-437-11	CARBON	47K	5%	1/4W	
R435	1-249-433-11	CARBON	22K	5%	1/4W	
R436	1-249-437-11	CARBON	47K	5%	1/4W	
R437	1-249-437-11	CARBON	47K	5%	1/4W	
R438	1-249-437-11	CARBON	47K	5%	1/4W	
R439	1-249-426-11	CARBON	5.6K	5%	1/4W	
R440	1-249-437-11	CARBON	47K	5%	1/4W	
R441	1-249-440-11	CARBON	82K	5%	1/4W	
R442	1-249-405-11	CARBON	100	5%	1/4W	
R443	1-249-405-11	CARBON	100	5%	1/4W	
R444	1-249-432-11	CARBON	18K	5%	1/4W	
R445	1-249-432-11	CARBON	18K	5%	1/4W	
R446	1-249-437-11	CARBON	47K	5%	1/4W	
R447	1-249-437-11	CARBON	47K	5%	1/4W	
R448	1-249-435-11	CARBON	33K	5%	1/4W	
R449	1-249-417-11	CARBON	1K	5%	1/4W	

<VARIABLE RESISTOR>

RV290	1-228-994-00	RES, ADJ, CARBON	10K
RV291	1-228-991-00	RES, ADJ, CARBON	2.2K
RV292	1-228-991-00	RES, ADJ, CARBON	2.2K

<TRANSFORMER>

T401	1-404-584-11	COIL

****

	*A-1245-456-A	FE BOARD, COMPLETE
		**********
	*4-341-751-01	EYELET
	*4-341-752-01	EYELET
	4-363-414-00	SPACER, MICA

<CAPACITOR>

C602 ⚠	1-161-830-51	CERAMIC	0.0047MF		500V
C603 ⚠	1-161-830-51	CERAMIC	0.0047MF		500V
C604 ⚠	1-161-830-51	CERAMIC	0.0047MF		500V
C605 ⚠	1-161-830-51	CERAMIC	0.0047MF		500V
C606	1-125-222-41	ELECT(BLOCK)	330MF	20%	400V
C607 ⚠	1-136-360-51	FILM	0.22MF	20%	250V
C608 ⚠	1-136-360-51	FILM	0.22MF	20%	250V
C611	1-102-973-00	CERAMIC	100PF	5%	50V
C612	1-161-754-00	CERAMIC	0.001MF	10%	3KV
C613	1-123-946-00	ELECT	4.7MF	20%	250V
C614	1-136-067-00	FILM	0.0036MF	3%	2KV
C615	1-129-765-00	FILM	0.047MF	10%	200V
C616	1-124-798-11	ELECT	1MF	20%	160V
C617	1-124-902-00	ELECT	0.47MF	20%	50V

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

FE

REF.NO.	PART NO.	DESCRIPTION				REMARK
C618	1-162-318-11	CERAMIC	0.001MF	10%	500V	
C619	1-123-875-11	ELECT	10MF	20%	50V	
C620	1-124-446-11	ELECT	47MF	20%	10V	
C621	1-130-475-00	FILM	0.0022MF	5%	50V	
C622	1-104-067-00	POLYSTYRENE	390PF	5%	50V	
C623	1-126-233-11	ELECT	22MF	20%	25V	
C624	1-162-318-11	CERAMIC	0.001MF	10%	500V	
C625	1-124-463-00	ELECT	0.1MF	20%	50V	
C626	1-161-973-00	CERAMIC	220PF	10%	400V	
C627	1-136-066-00	FILM	0.003MF	3%	2KV	
C631	1-162-116-00	CERAMIC	680PF	10%	2KV	
C633	1-162-131-11	CERAMIC	220PF	10%	2KV	
C651	1-125-494-11	ELECT(BLOCK)	560MF	20%	160V	
C654	1-102-030-00	CERAMIC	330PF	10%	500V	
C656	1-102-030-00	CERAMIC	330PF	10%	500V	
C657	1-161-973-00	CERAMIC	220PF	10%	400V	
C658	1-124-499-11	ELECT	1MF	20%	50V	
C659	1-108-614-11	MYLAR	0.001MF	10%	100V	
C660 ⚠	1-162-578-51	CERAMIC	0.0047MF	20%	400V	
C661 ⚠	1-162-578-51	CERAMIC	0.0047MF	20%	400V	
C671	1-126-103-11	ELECT	470MF	20%	16V	
C674	1-126-105-11	ELECT	1000MF	20%	35V	
C675	1-162-116-00	CERAMIC	680PF	10%	2KV	
C676	1-102-973-00	CERAMIC	100PF	5%	50V	

<DIODE>

D601 ⚠	8-719-503-06	DIODE S3WB60Z	
D605	8-719-911-19	DIODE 1SS119	
D606	8-719-911-19	DIODE 1SS119	
D607	8-719-110-90	DIODE RD39ES-B4	
D608	8-719-110-90	DIODE RD39ES-B4	
D611	8-719-118-34	DIODE RD110E-B	
D612	8-719-925-06	DIODE ERC25-06S	
D613	8-719-200-02	DIODE 10E2	
D614	8-719-925-06	DIODE ERC25-06S	
D615	8-719-109-97	DIODE RD6.8E-B2	
D616	8-719-925-06	DIODE ERC25-06S	
D617	8-719-911-19	DIODE 1SS119	
D619	8-719-911-19	DIODE 1SS119	
D620	8-719-925-06	DIODE ERC25-06S	
D622	8-719-100-74	DIODE RD16E-B2	
D651	8-719-300-33	DIODE RU3AM	
D652	8-719-200-02	DIODE 10E2	
D653	8-719-300-76	DIODE RH-1A	
D654	8-719-911-19	DIODE 1SS119	
D655	8-719-110-41	DIODE RD15ES-B2	

<CONNECTOR>

F1	*1-568-106-11	PIN, CONNECTOR 7P
F3	*1-508-765-00	PIN, CONNECTOR (5MM PITCH) 3P
F5	*1-508-768-00	PIN, CONNECTOR (5MM PITCH) 6P
F6	*1-506-371-00	PIN, CONNECTOR 2P
F7	*1-568-106-11	PIN, CONNECTOR 7P

<FUSE>

F601 ⚠	1-532-350-11	FUSE, TIME-LAG 4A/250V
	*1-533-189-11	HOLDER, FUSE; F601

<IC>

IC601	8-759-100-75	IC UPC1394C
IC602	8-719-939-00	IC PC111S
IC651	8-759-927-49	IC IR9431

<COIL>

L621	1-407-365-00	COIL, CHOKE
L622	1-408-226-00	INDUCTOR 82UH
L623	1-410-397-21	FERRITE BEAD INDUCTOR
L624 ⚠	1-410-396-31	FERRITE BEAD INDUCTOR
L625 ⚠	1-410-396-31	FERRITE BEAD INDUCTOR
L626 ⚠	1-459-946-11	COIL, NOISE FILTER
L627 ⚠	1-459-946-11	COIL, NOISE FILTER

<IC LINK>

PS602 ⚠	1-532-838-21	LINK, IC 0.8A/125V

<TRANSISTOR>

Q611	8-729-119-80	TRANSISTOR 2SC2688-LK
Q612	8-729-119-80	TRANSISTOR 2SC2688-LK
Q613	8-729-802-14	TRANSISTOR 2SC3460
Q614	8-729-119-80	TRANSISTOR 2SC2688-LK
Q615	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q617	8-729-119-78	TRANSISTOR 2SC2785-HFE

<RESISTOR>

R601	1-205-712-00	WIREWOUND	3.9	5%	20W	
R602 ⚠	1-214-947-21	METAL	2.7M	1%	1/2W	
R603 ⚠	1-247-721-51	CARBON	4.7K	5%	1/4W	F
R604 ⚠	1-247-721-51	CARBON	4.7K	5%	1/4W	F
R605	1-202-720-00	SOLID	1.2M	10%	1/2W	
R606	1-249-423-11	CARBON	3.3K	5%	1/4W	
R610	1-249-405-11	CARBON	100	5%	1/4W	
R611	1-216-444-11	METAL OXIDE	82K	5%	1W	F
R612	1-216-444-11	METAL OXIDE	82K	5%	1W	F
R613	1-249-496-11	CARBON	100K	5%	1/2W	F
R614	1-215-923-00	METAL OXIDE	10K	5%	3W	F
R615	1-247-887-00	CARBON	220K	5%	1/4W	
R616	1-247-711-11	CARBON	680	5%	1/4W	
R617	1-247-725-11	CARBON	10K	5%	1/4W	
R618	1-249-396-11	CARBON	18	5%	1/4W	
R619	1-247-710-11	CARBON	560	5%	1/4W	F
R620	1-217-192-21	WIREWOUND	0.22	10%	2W	F
R621	1-249-423-11	CARBON	3.3K	5%	1/4W	
R622	1-249-434-11	CARBON	27K	5%	1/4W	
R623	1-215-457-00	METAL	33K	1%	1/6W	
R624	1-249-429-11	CARBON	10K	5%	1/4W	
R625	1-247-726-11	CARBON	33K	5%	1/4W	
R626	1-249-411-11	CARBON	330	5%	1/4W	
R627	1-249-438-11	CARBON	56K	5%	1/4W	
R628	1-247-887-00	CARBON	220K	5%	1/4W	
R629	1-249-428-11	CARBON	8.2K	5%	1/4W	
R630	1-249-436-11	CARBON	39K	5%	1/4W	
R631	1-249-424-11	CARBON	3.9K	5%	1/4W	
R632	1-247-753-11	CARBON	1.2K	5%	1/2W	F
R633	1-249-441-11	CARBON	100K	5%	1/4W	
R634	1-249-417-11	CARBON	1K	5%	1/4W	
R635	1-205-928-11	WIREWOUND	180	10%	10W	
R636	1-205-927-11	WIREWOUND	2.2K	10%	10W	
R637	1-216-465-11	METAL OXIDE	27K	5%	2W	F
R640	1-249-438-11	CARBON	56K	5%	1/4W	
R644	1-247-885-00	CARBON	180K	5%	1/4W	

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

FE QA

REF.NO.	PART NO.	DESCRIPTION				REMARK
R648	1-247-887-00	CARBON	220K	5%	1/4W	
R651	1-247-881-00	CARBON	120K	5%	1/4W	
R652	1-215-924-00	METAL OXIDE	15K	5%	3W	F
R653	1-249-417-11	CARBON	1K	5%	1/4W	
R654	1-247-881-00	CARBON	120K	5%	1/4W	
R655	1-249-469-11	CARBON	100K	5%	1/4W	
R656	1-247-895-00	CARBON	470K	5%	1/4W	
R657	1-247-883-00	CARBON	150K	5%	1/4W	
R658 ⚠	1-247-289-11	CARBON	8.2M	5%	1W	
R661	1-249-443-11	CARBON	0.47	5%	1/4W	F
R665	1-249-420-11	CARBON	1.8K	5%	1/4W	
R669	1-249-443-11	CARBON	0.47	5%	1/4W	F
R671	1-249-410-11	CARBON	270	5%	1/4W	
R682	1-215-923-00	METAL OXIDE	10K	5%	3W	F
R688	1-249-427-11	CARBON	6.8K	5%	1/4W	
R691	1-216-489-11	METAL OXIDE	27K	5%	3W	F
R692	1-202-719-00	SOLID	1M	10%	1/2W	

<VARIABLE RESISTOR>

RV601	1-230-504-11	RES, ADJ, CARBON 220	

<TRANSFORMER>

T602	1-437-079-00	TRANSFORMER, HORIZONTAL DRIVE	
T603 ⚠	1-448-895-11	SRT	
T604 ⚠	1-421-776-11	LFT	
T605 ⚠	1-421-758-11	TRANSFORMER, LINE FILTER (LFT)	

<THERMISTOR>

TH611	1-800-200-00	THERMISTOR S-3K	
THP601 ⚠	1-808-059-21	THERMISTOR, POSITIVE	

****

*A-1270-245-A	QA BOARD, COMPLETE (PVM-1444QM ONLY)		
	**********		
1-537-191-11	TERMINAL BOARD, INPUT/OUTPUT		
1-537-201-11	TERMINAL BOARD, INPUT OUTPUT		
*4-379-104-01	INSULATOR, SLIDE SW		

<CAPACITOR>

C101	1-124-589-11	ELECT	47MF	20%	16V
C102	1-126-160-11	ELECT	1MF	20%	50V
C103	1-126-160-11	ELECT	1MF	20%	50V
C105	1-126-160-11	ELECT	1MF	20%	50V
C106	1-126-160-11	ELECT	1MF	20%	50V
C107	1-126-160-11	ELECT	1MF	20%	50V
C108	1-124-589-11	ELECT	47MF	20%	16V
C109	1-126-160-11	ELECT	1MF	20%	50V
C110	1-126-160-11	ELECT	1MF	20%	50V
C111	1-126-160-11	ELECT	1MF	20%	50V
C112	1-124-589-11	ELECT	47MF	20%	16V
C113	1-124-589-11	ELECT	47MF	20%	16V
C114	1-124-589-11	ELECT	47MF	20%	16V
C115	1-124-589-11	ELECT	47MF	20%	16V
C116	1-161-021-11	CERAMIC	0.047MF	10%	25V
C117	1-124-589-11	ELECT	47MF	20%	16V
C118	1-124-589-11	ELECT	47MF	20%	16V
C119	1-126-160-11	ELECT	1MF	20%	50V
C120	1-126-160-11	ELECT	1MF	20%	50V
C121	1-124-589-11	ELECT	47MF	20%	16V
C122	1-124-589-11	ELECT	47MF	20%	16V
C123	1-124-589-11	ELECT	47MF	20%	16V
C124	1-124-589-11	ELECT	47MF	20%	16V
C125	1-124-589-11	ELECT	47MF	20%	16V
C137	1-126-160-11	ELECT	1MF	20%	50V
C138	1-126-160-11	ELECT	1MF	20%	50V
C139	1-124-589-11	ELECT	47MF	20%	16V
C140	1-124-589-11	ELECT	47MF	20%	16V
C141	1-124-589-11	ELECT	47MF	20%	16V
C153	1-124-589-11	ELECT	47MF	20%	16V
C161	1-124-589-11	ELECT	47MF	20%	16V
C162	1-161-021-11	CERAMIC	0.047MF	10%	25V
C163	1-161-021-11	CERAMIC	0.047MF	10%	25V

<IC>

IC101	8-759-800-81	IC LA7016
IC102	8-759-710-31	IC NJM2243S
IC103	8-759-800-81	IC LA7016

<TRANSISTOR>

Q106	8-729-119-78	TRANSISTOR 2SC2785-HFE

<RESISTOR>

R101	1-249-429-11	CARBON	10K	5%	1/4W
R103	1-249-405-11	CARBON	100	5%	1/4W
R104	1-249-433-11	CARBON	22K	5%	1/4W
R105	1-249-433-11	CARBON	22K	5%	1/4W
R106	1-249-429-11	CARBON	10K	5%	1/4W
R107	1-249-417-11	CARBON	1K	5%	1/4W
R108	1-249-429-11	CARBON	10K	5%	1/4W
R110	1-249-405-11	CARBON	100	5%	1/4W
R111	1-249-433-11	CARBON	22K	5%	1/4W
R112	1-249-433-11	CARBON	22K	5%	1/4W
R113	1-247-104-00	CARBON	75	5%	1/4W
R115	1-247-104-00	CARBON	75	5%	1/4W
R117	1-249-405-11	CARBON	100	5%	1/4W
R118	1-249-433-11	CARBON	22K	5%	1/4W
R119	1-249-433-11	CARBON	22K	5%	1/4W
R120	1-249-429-11	CARBON	10K	5%	1/4W
R121	1-249-405-11	CARBON	100	5%	1/4W
R122	1-247-104-00	CARBON	75	5%	1/4W
R123	1-249-405-11	CARBON	100	5%	1/4W
R124	1-249-421-11	CARBON	2.2K	5%	1/4W
R125	1-249-429-11	CARBON	10K	5%	1/4W
R126	1-247-104-00	CARBON	75	5%	1/4W
R127	1-247-104-00	CARBON	75	5%	1/4W
R128	1-247-104-00	CARBON	75	5%	1/4W
R129	1-247-104-00	CARBON	75	5%	1/4W
R130	1-247-104-00	CARBON	75	5%	1/4W
R131	1-247-104-00	CARBON	75	5%	1/4W
R132	1-249-417-11	CARBON	1K	5%	1/4W
R168	1-249-429-11	CARBON	10K	5%	1/4W
R177	1-249-405-11	CARBON	100	5%	1/4W
R178	1-249-433-11	CARBON	22K	5%	1/4W
R179	1-249-433-11	CARBON	22K	5%	1/4W
R184	1-249-420-11	CARBON	1.8K	5%	1/4W

<VARIABLE RESISTOR>

RV101	1-228-848-00	RES, VAR, CARBON 10K

QA QB

REF.NO.	PART NO.	DESCRIPTION				REMARK
		<SWITCH>				
S101	1-570-145-11	SWITCH, SLIDE				
S102	1-570-145-11	SWITCH, SLIDE				
**********						
	*A-1270-246-A	QB BOARD, COMPLETE (PVM-1444QM ONLY)				
		**********				
		<CAPACITOR>				
C126	1-124-477-11	ELECT	47MF	20%	25V	
C127	1-124-477-11	ELECT	47MF	20%	25V	
C128	1-124-477-11	ELECT	47MF	20%	25V	
C129	1-161-021-11	CERAMIC	0.047MF	10%	25V	
C130	1-124-477-11	ELECT	47MF	20%	25V	
C131	1-124-477-11	ELECT	47MF	20%	25V	
C132	1-124-477-11	ELECT	47MF	20%	25V	
C133	1-124-477-11	ELECT	47MF	20%	25V	
C134	1-124-477-11	ELECT	47MF	20%	25V	
C135	1-124-477-11	ELECT	47MF	20%	25V	
C136	1-124-477-11	ELECT	47MF	20%	25V	
C142	1-124-631-11	ELECT	47MF	20%	16V	
C143	1-124-477-11	ELECT	47MF	20%	25V	
C144	1-124-477-11	ELECT	47MF	20%	25V	
C145	1-124-477-11	ELECT	47MF	20%	25V	
C146	1-124-477-11	ELECT	47MF	20%	25V	
C147	1-101-004-00	CERAMIC	0.01MF		50V	
C148	1-101-004-00	CERAMIC	0.01MF		50V	
C149	1-124-478-11	ELECT	100MF	20%	25V	
C150	1-124-499-11	ELECT	1MF	20%	50V	
C151	1-161-021-11	CERAMIC	0.047MF	10%	25V	
C152	1-124-925-11	ELECT	2.2MF	20%	50V	
C154	1-101-004-00	CERAMIC	0.01MF		50V	
C169	1-124-477-11	ELECT	47MF	20%	25V	
		<DIODE>				
D101	8-719-911-19	DIODE 1SS119				
D102	8-719-911-19	DIODE 1SS119				
D105	8-719-911-19	DIODE 1SS119				
D106	8-719-911-19	DIODE 1SS119				
D111	8-719-911-19	DIODE 1SS119				
D112	8-719-911-19	DIODE 1SS119				
		<IC>				
IC104	8-759-800-81	IC LA7016				
IC105	8-759-800-81	IC LA7016				
IC106	8-759-710-31	IC NJM2243S				
IC107	8-759-800-81	IC LA7016				
IC108	8-759-240-11	IC TC4011BP				
		<TRANSISTOR>				
Q101	8-729-900-36	TRANSISTOR DTC124ES				
Q103	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q104	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q110	8-729-119-76	TRANSISTOR 2SA1175-HFE				
Q111	8-729-119-76	TRANSISTOR 2SA1175-HFE				
Q112	8-729-119-76	TRANSISTOR 2SA1175-HFE				
Q113	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q114	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q115	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q116	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q120	8-729-900-65	TRANSISTOR DTA144ES				
Q121	8-729-900-65	TRANSISTOR DTA144ES				
		<CONNECTOR>				
QB6	*1-560-290-00	PLUG, CONNECTOR (2.5MM PITCH)				
		<RESISTOR>				
R133	1-249-405-11	CARBON	100	5%	1/4W	
R134	1-249-433-11	CARBON	22K	5%	1/4W	
R135	1-249-433-11	CARBON	22K	5%	1/4W	
R137	1-249-433-11	CARBON	22K	5%	1/4W	
R138	1-249-433-11	CARBON	22K	5%	1/4W	
R139	1-249-405-11	CARBON	100	5%	1/4W	
R140	1-249-433-11	CARBON	22K	5%	1/4W	
R141	1-249-433-11	CARBON	22K	5%	1/4W	
R142	1-249-433-11	CARBON	22K	5%	1/4W	
R143	1-249-433-11	CARBON	22K	5%	1/4W	
R144	1-249-412-11	CARBON	390	5%	1/4W	
R145	1-249-405-11	CARBON	100	5%	1/4W	
R146	1-249-436-11	CARBON	39K	5%	1/4W	
R147	1-249-435-11	CARBON	33K	5%	1/4W	
R149	1-249-433-11	CARBON	22K	5%	1/4W	
R150	1-249-433-11	CARBON	22K	5%	1/4W	
R151	1-249-429-11	CARBON	10K	5%	1/4W	
R152	1-249-429-11	CARBON	10K	5%	1/4W	
R153	1-249-417-11	CARBON	1K	5%	1/4W	
R154	1-249-422-11	CARBON	2.7K	5%	1/4W	
R155	1-215-383-00	METAL	27	1%	1/6W	
R161	1-215-397-00	METAL	100	1%	1/6W	
R162	1-215-397-00	METAL	100	1%	1/6W	
R163	1-249-422-11	CARBON	2.7K	5%	1/4W	
R164	1-215-431-00	METAL	2.7K	1%	1/6W	
R165	1-249-422-11	CARBON	2.7K	5%	1/4W	
R166	1-215-431-00	METAL	2.7K	1%	1/6W	
R167	1-249-422-11	CARBON	2.7K	5%	1/4W	
R169	1-249-429-11	CARBON	10K	5%	1/4W	
R170	1-249-437-11	CARBON	47K	5%	1/4W	
R171	1-249-437-11	CARBON	47K	5%	1/4W	
R172	1-249-417-11	CARBON	1K	5%	1/4W	
R173	1-249-405-11	CARBON	100	5%	1/4W	
R175	1-249-433-11	CARBON	22K	5%	1/4W	
R176	1-249-433-11	CARBON	22K	5%	1/4W	
R180	1-249-417-11	CARBON	1K	5%	1/4W	
R181	1-249-417-11	CARBON	1K	5%	1/4W	
R182	1-249-409-11	CARBON	220	5%	1/4W	
R183	1-249-409-11	CARBON	220	5%	1/4W	
R186	1-249-435-11	CARBON	33K	5%	1/4W	
R187	1-249-417-11	CARBON	1K	5%	1/4W	
R188	1-249-435-11	CARBON	33K	5%	1/4W	
R189	1-249-433-11	CARBON	22K	5%	1/4W	
R190	1-249-433-11	CARBON	22K	5%	1/4W	
R191	1-249-420-11	CARBON	1.8K	5%	1/4W	
R192	1-249-420-11	CARBON	1.8K	5%	1/4W	
R193	1-249-420-11	CARBON	1.8K	5%	1/4W	
R194	1-215-419-00	METAL	820	1%	1/6W	
R197	1-249-417-11	CARBON	1K	5%	1/4W	
R198	1-249-429-11	CARBON	10K	5%	1/4W	
R199	1-249-417-11	CARBON	1K	5%	1/4W	
R201	1-249-405-11	CARBON	100	5%	1/4W	
R202	1-249-405-11	CARBON	100	5%	1/4W	

QB QC QD

REF.NO.	PART NO.	DESCRIPTION				REMARK
R203	1-249-405-11	CARBON	100	5%	1/4W	
R204	1-249-425-11	CARBON	4.7K	5%	1/4W	
R205	1-249-441-11	CARBON	100K	5%	1/4W	
R206	1-249-433-11	CARBON	22K	5%	1/4W	
R207	1-249-441-11	CARBON	100K	5%	1/4W	
R208	1-249-415-11	CARBON	680	5%	1/4W	
R209	1-249-405-11	CARBON	100	5%	1/4W	
R210	1-249-405-11	CARBON	100	5%	1/4W	
R211	1-249-417-11	CARBON	1K	5%	1/4W	
R212	1-249-420-11	CARBON	1.8K	5%	1/4W	
R213	1-249-426-11	CARBON	5.6K	5%	1/4W	
R214	1-215-436-00	METAL	4.3K	1%	1/6W	
R215	1-215-436-00	METAL	4.3K	1%	1/6W	

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*A-1270-247-A QC BOARD, COMPLETE (PVM-1442QM ONLY)
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1-537-191-11 TERMINAL BOARD, INPUT/OUTPUT
1-537-192-11 TERMINAL BOARD, INPUT/OUTPUT
*4-379-104-01 INSULATOR, SLIDE SW

<CAPACITOR>

C101	1-124-589-11	ELECT	47MF	20%	16V
C102	1-126-160-11	ELECT	1MF	20%	50V
C103	1-126-160-11	ELECT	1MF	20%	50V
C104	1-161-021-11	CERAMIC	0.047MF	10%	25V
C105	1-126-160-11	ELECT	1MF	20%	50V
C106	1-126-160-11	ELECT	1MF	20%	50V
C107	1-124-589-11	ELECT	47MF	20%	16V
C108	1-124-589-11	ELECT	47MF	20%	16V
C109	1-124-589-11	ELECT	47MF	20%	16V
C110	1-124-589-11	ELECT	47MF	20%	16V
C111	1-124-589-11	ELECT	47MF	20%	16V
C112	1-124-589-11	ELECT	47MF	20%	16V
C113	1-124-589-11	ELECT	47MF	20%	16V
C114	1-126-160-11	ELECT	1MF	20%	50V
C115	1-126-160-11	ELECT	1MF	20%	50V
C116	1-124-589-11	ELECT	47MF	20%	16V
C117	1-126-157-11	ELECT	10MF	20%	16V
C118	1-126-157-11	ELECT	10MF	20%	16V
C119	1-126-157-11	ELECT	10MF	20%	16V
C120	1-124-589-11	ELECT	47MF	20%	16V
C122	1-124-589-11	ELECT	47MF	20%	16V
C123	1-124-589-11	ELECT	47MF	20%	16V

<IC>

IC101 8-759-800-81 IC LA7016

<TRANSISTOR>

Q122 8-729-119-78 TRANSISTOR 2SC2785-HFE

<RESISTOR>

R101	1-249-429-11	CARBON	10K	5%	1/4W
R102	1-249-405-11	CARBON	100	5%	1/4W
R103	1-249-429-11	CARBON	10K	5%	1/4W
R104	1-249-405-11	CARBON	100	5%	1/4W
R105	1-247-104-00	CARBON	75	5%	1/4W
R106	1-249-405-11	CARBON	100	5%	1/4W
R107	1-247-104-00	CARBON	75	5%	1/4W
R108	1-249-405-11	CARBON	100	5%	1/4W
R109	1-247-104-00	CARBON	75	5%	1/4W
R110	1-247-104-00	CARBON	75	5%	1/4W
R111	1-249-429-11	CARBON	10K	5%	1/4W
R112	1-249-405-11	CARBON	100	5%	1/4W
R113	1-249-429-11	CARBON	10K	5%	1/4W
R114	1-247-104-00	CARBON	75	5%	1/4W
R115	1-249-405-11	CARBON	100	5%	1/4W
R116	1-247-704-11	CARBON	220	5%	1/4W
R117	1-247-703-11	CARBON	180	5%	1/4W
R118	1-247-703-11	CARBON	180	5%	1/4W
R119	1-249-417-11	CARBON	1K	5%	1/4W
R121	1-249-417-11	CARBON	1K	5%	1/4W
R122	1-215-393-00	METAL	68	1%	1/6W
R123	1-249-417-11	CARBON	1K	5%	1/4W
R125	1-249-405-11	CARBON	100	5%	1/4W
R126	1-249-433-11	CARBON	22K	5%	1/4W
R127	1-249-433-11	CARBON	22K	5%	1/4W
R128	1-249-429-11	CARBON	10K	5%	1/4W
R129	1-247-104-00	CARBON	75	5%	1/4W
R130	1-247-104-00	CARBON	75	5%	1/4W
R131	1-247-104-00	CARBON	75	5%	1/4W
R132	1-249-417-11	CARBON	1K	5%	1/4W
R133	1-247-104-00	CARBON	75	5%	1/4W
R134	1-249-417-11	CARBON	1K	5%	1/4W
R220	1-215-429-00	METAL	2.2K	1%	1/6W
R221	1-215-429-00	METAL	2.2K	1%	1/6W
R222	1-215-429-00	METAL	2.2K	1%	1/6W
R254	1-249-420-11	CARBON	1.8K	5%	1/4W
R298	1-249-431-11	CARBON	15K	5%	1/4W

<VARIABLE RESISTOR>

RV101 1-228-848-00 RES, VAR, CARBON 10K
RV102 1-228-848-00 RES, VAR, CARBON 10K

<SWITCH>

S101 1-570-145-11 SWITCH, SLIDE

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*A-1270-248-A QD BOARD, COMPLETE (PVM-1442QM ONLY)
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<CAPACITOR>

C121	1-126-094-11	ELECT	4.7MF	20%	25V
C124	1-101-004-00	CERAMIC	0.01MF		50V
C125	1-124-477-11	ELECT	47MF	20%	16V
C126	1-124-589-11	ELECT	47MF	20%	16V
C127	1-101-004-00	CERAMIC	0.01MF		50V
C128	1-124-589-11	ELECT	47MF	20%	16V
C129	1-124-589-11	ELECT	47MF	20%	16V
C130	1-124-584-00	ELECT	100MF	20%	10V
C131	1-161-021-11	CERAMIC	0.047MF	10%	25V
C132	1-102-963-00	CERAMIC	33PF	5%	50V
C133	1-126-157-11	ELECT	10MF	20%	16V
C134	1-161-021-11	CERAMIC	0.047MF	10%	25V
C135	1-106-375-12	MYLAR	0.022MF	10%	100V
C136	1-101-004-00	CERAMIC	0.01MF		50V
C137	1-124-589-11	ELECT	47MF	20%	16V
C138	1-124-589-11	ELECT	47MF	20%	16V
C139	1-126-160-11	ELECT	1MF	20%	50V

QD

REF.NO.	PART NO.	DESCRIPTION				REMARK
C140	1-124-589-11	ELECT	47MF	20%	16V	
C141	1-102-965-00	CERAMIC	39PF	5%	50V	
C142	1-102-965-00	CERAMIC	39PF	5%	50V	
C143	1-102-965-00	CERAMIC	39PF	5%	50V	
C144	1-126-094-11	ELECT	4.7MF	20%	25V	
C145	1-161-021-11	CERAMIC	0.047MF	10%	25V	
C146	1-124-589-11	ELECT	47MF	20%	16V	
C147	1-124-589-11	ELECT	47MF	20%	16V	
C148	1-126-157-11	ELECT	10MF	20%	16V	
C149	1-130-728-00	FILM	0.0022MF	10%	50V	
C150	1-130-483-00	MYLAR	0.01MF	5%	50V	
C151	1-130-471-00	FILM	0.001MF	10%	50V	
C172	1-101-005-00	CERAMIC	0.022MF		50V	
C173	1-136-169-00	FILM	0.22MF	5%	50V	
C174	1-102-965-00	CERAMIC	39PF	5%	50V	
		<DIODE>				
D102	8-719-110-03	DIODE RD7.5ES-B2				
D103	8-719-911-19	DIODE 1SS119				
D104	8-719-911-19	DIODE 1SS119				
D105	8-719-911-19	DIODE 1SS119				
D106	8-719-109-85	DIODE RD5.1ES-B2				
D107	8-719-109-85	DIODE RD5.1ES-B2				
D113	8-719-911-19	DIODE 1SS119				
D116	8-719-911-19	DIODE 1SS119				
		<IC>				
IC102	8-759-900-09	IC SN74LS09N				
IC103	8-759-901-38	IC SN74LS138N				
IC104	8-759-901-36	IC SN74LS136N				
IC105	8-759-900-11	IC SN74LS11N				
IC106	8-759-800-81	IC LA7016				
IC107	8-759-933-23	IC BA236				
		<FILTER MODULE>				
LP101	1-235-988-11	FILTER MODULE, LOW PASS				
		<TRANSISTOR>				
Q101	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q102	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q103	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q104	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q105	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q106	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q107	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q108	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q109	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q110	8-729-900-36	TRANSISTOR DTC124ES				
Q111	8-729-900-89	TRANSISTOR DTC144ES				
Q112	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q113	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q114	8-729-900-36	TRANSISTOR DTC124ES				
Q115	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q125	8-729-119-76	TRANSISTOR 2SA1175-HFE				
Q131	8-729-119-76	TRANSISTOR 2SA1175-HFE				
Q132	8-729-119-76	TRANSISTOR 2SA1175-HFE				
Q135	8-729-900-65	TRANSISTOR DTA144ES				
		<RESISTOR>				
R135	1-249-417-11	CARBON	1K	5%	1/4W	
R136	1-249-411-11	CARBON	330	5%	1/4W	
R137	1-249-418-11	CARBON	1.2K	5%	1/4W	
R138	1-249-421-11	CARBON	2.2K	5%	1/4W	
R139	1-249-424-11	CARBON	3.9K	5%	1/4W	
R140	1-249-417-11	CARBON	1K	5%	1/4W	
R141	1-249-425-11	CARBON	4.7K	5%	1/4W	
R142	1-249-435-11	CARBON	33K	5%	1/4W	
R143	1-249-435-11	CARBON	33K	5%	1/4W	
R144	1-249-417-11	CARBON	1K	5%	1/4W	
R145	1-249-411-11	CARBON	330	5%	1/4W	
R146	1-249-417-11	CARBON	1K	5%	1/4W	
R147	1-249-411-11	CARBON	330	5%	1/4W	
R148	1-249-429-11	CARBON	10K	5%	1/4W	
R149	1-249-425-11	CARBON	4.7K	5%	1/4W	
R150	1-249-417-11	CARBON	1K	5%	1/4W	
R151	1-249-429-11	CARBON	10K	5%	1/4W	
R152	1-249-429-11	CARBON	10K	5%	1/4W	
R153	1-249-405-11	CARBON	100	5%	1/4W	
R154	1-249-405-11	CARBON	100	5%	1/4W	
R155	1-249-433-11	CARBON	22K	5%	1/4W	
R156	1-249-433-11	CARBON	22K	5%	1/4W	
R157	1-249-430-11	CARBON	12K	5%	1/4W	
R158	1-249-417-11	CARBON	1K	5%	1/4W	
R159	1-247-706-11	CARBON	330	5%	1/4W	
R160	1-247-706-11	CARBON	330	5%	1/4W	
R161	1-247-706-11	CARBON	330	5%	1/4W	
R162	1-249-426-11	CARBON	5.6K	5%	1/4W	
R163	1-249-421-11	CARBON	2.2K	5%	1/4W	
R164	1-249-421-11	CARBON	2.2K	5%	1/4W	
R165	1-249-425-11	CARBON	4.7K	5%	1/4W	
R166	1-249-425-11	CARBON	4.7K	5%	1/4W	
R167	1-247-721-11	CARBON	4.7K	5%	1/4W	
R168	1-249-421-11	CARBON	2.2K	5%	1/4W	
R169	1-249-433-11	CARBON	22K	5%	1/4W	
R170	1-249-437-11	CARBON	47K	5%	1/4W	
R171	1-247-725-11	CARBON	10K	5%	1/4W	
R172	1-249-405-11	CARBON	100	5%	1/4W	
R173	1-247-716-11	CARBON	1.8K	5%	1/4W	
R174	1-249-432-11	CARBON	18K	5%	1/4W	
R175	1-249-408-11	CARBON	180	5%	1/4W	
R176	1-249-437-11	CARBON	47K	5%	1/4W	
R178	1-249-418-11	CARBON	1.2K	5%	1/4W	
R179	1-247-713-11	CARBON	1K	5%	1/4W	
R220	1-249-429-11	CARBON	10K	5%	1/4W	
R221	1-249-437-11	CARBON	47K	5%	1/4W	
R222	1-249-437-11	CARBON	47K	5%	1/4W	
R223	1-249-417-11	CARBON	1K	5%	1/4W	
R224	1-249-429-11	CARBON	10K	5%	1/4W	
R225	1-249-425-11	CARBON	4.7K	5%	1/4W	
R226	1-249-409-11	CARBON	220	5%	1/4W	
R231	1-249-432-11	CARBON	18K	5%	1/4W	
R235	1-249-425-11	CARBON	4.7K	5%	1/4W	
R236	1-249-417-11	CARBON	1K	5%	1/4W	
R237	1-249-420-11	CARBON	1.8K	5%	1/4W	
R241	1-249-408-11	CARBON	180	5%	1/4W	
R242	1-249-405-11	CARBON	100	5%	1/4W	
R244	1-249-405-11	CARBON	100	5%	1/4W	
R260	1-249-433-11	CARBON	22K	5%	1/4W	
R261	1-249-433-11	CARBON	22K	5%	1/4W	
R263	1-249-405-11	CARBON	100	5%	1/4W	
R299	1-249-420-11	CARBON	1.8K	5%	1/4W	

QD QE QF

REF.NO.	PART NO.	DESCRIPTION			REMARK
		<VARIABLE RESISTOR>			
RV103	1-228-995-00	RES, ADJ, CARBON 22K			
		<SWITCH>			
S102	1-553-977-41	SWITCH, SLIDE			
		**********			
	*A-1270-249-A	QE BOARD, COMPLETE(PVM-1442QM ONLY)			
		**********			
		<CAPACITOR>			
C152	1-101-004-00	CERAMIC	0.01MF	50V	
C154	1-123-875-11	ELECT	10MF	20% 50V	
C155	1-124-499-11	ELECT	1MF	20% 50V	
C156	1-124-499-11	ELECT	1MF	20% 50V	
C157	1-126-160-11	ELECT	1MF	20% 50V	
C158	1-124-477-11	ELECT	47MF	20% 25V	
C159	1-126-160-11	ELECT	1MF	20% 50V	
C160	1-124-499-11	ELECT	1MF	20% 50V	
C161	1-124-477-11	ELECT	47MF	20% 16V	
C162	1-124-477-11	ELECT	47MF	20% 16V	
C163	1-124-477-11	ELECT	47MF	20% 16V	
C164	1-161-021-11	CERAMIC	0.047MF	10% 25V	
C165	1-124-477-11	ELECT	47MF	20% 16V	
C166	1-124-477-11	ELECT	47MF	20% 16V	
C167	1-124-477-11	ELECT	47MF	20% 16V	
C168	1-124-589-11	ELECT	47MF	20% 16V	
C169	1-161-021-11	CERAMIC	0.047MF	10% 25V	
C170	1-124-477-11	ELECT	47MF	20% 25V	
C171	1-124-925-11	ELECT	2.2MF	20% 50V	
		<DIODE>			
D108	8-719-911-19	DIODE 1SS119			
D109	8-719-911-19	DIODE 1SS119			
D110	8-719-911-19	DIODE 1SS119			
D111	8-719-911-19	DIODE 1SS119			
D112	8-719-911-19	DIODE 1SS119			
D114	8-719-911-19	DIODE 1SS119			
D115	8-719-911-19	DIODE 1SS119			
		<IC>			
IC108	8-759-800-81	IC LA7016			
IC109	8-759-800-81	IC LA7016			
IC110	8-759-800-81	IC LA7016			
IC111	8-759-710-31	IC NJM2243S			
		<TRANSISTOR>			
Q116	8-729-119-78	TRANSISTOR 2SC2785-HFE			
Q117	8-729-119-78	TRANSISTOR 2SC2785-HFE			
Q118	8-729-119-76	TRANSISTOR 2SA1175-HFE			
Q119	8-729-900-36	TRANSISTOR DTC124ES			
Q120	8-729-119-78	TRANSISTOR 2SC2785-HFE			
Q121	8-729-119-78	TRANSISTOR 2SC2785-HFE			
Q127	8-729-900-65	TRANSISTOR DTA144ES			
		<CONNECTOR>			
QE1	*1-564-515-11	PLUG, CONNECTOR 12P			
QE2	*1-564-516-11	PLUG, CONNECTOR 13P			
QE3	*1-560-290-00	PLUG, CONNECTOR (2.5MM PITCH)			
		<RESISTOR>			
R180	1-249-405-11	CARBON	100	5% 1/4W	
R181	1-249-412-11	CARBON	390	5% 1/4W	
R182	1-249-417-11	CARBON	1K	5% 1/4W	
R183	1-249-436-11	CARBON	39K	5% 1/4W	
R184	1-249-435-11	CARBON	33K	5% 1/4W	
R185	1-249-405-11	CARBON	100	5% 1/4W	
R186	1-249-433-11	CARBON	22K	5% 1/4W	
R187	1-249-433-11	CARBON	22K	5% 1/4W	
R188	1-249-405-11	CARBON	100	5% 1/4W	
R189	1-249-433-11	CARBON	22K	5% 1/4W	
R190	1-249-433-11	CARBON	22K	5% 1/4W	
R192	1-249-437-11	CARBON	47K	5% 1/4W	
R193	1-249-429-11	CARBON	10K	5% 1/4W	
R194	1-249-433-11	CARBON	22K	5% 1/4W	
R195	1-249-433-11	CARBON	22K	5% 1/4W	
R196	1-249-405-11	CARBON	100	5% 1/4W	
R197	1-249-421-11	CARBON	2.2K	5% 1/4W	
R198	1-249-421-11	CARBON	2.2K	5% 1/4W	
R199	1-249-441-11	CARBON	100K	5% 1/4W	
R200	1-249-435-11	CARBON	33K	5% 1/4W	
R201	1-249-428-11	CARBON	8.2K	5% 1/4W	
R202	1-249-417-11	CARBON	1K	5% 1/4W	
R203	1-249-429-11	CARBON	10K	5% 1/4W	
R204	1-249-428-11	CARBON	8.2K	5% 1/4W	
R205	1-249-405-11	CARBON	100	5% 1/4W	
R206	1-249-429-11	CARBON	10K	5% 1/4W	
R207	1-249-429-11	CARBON	10K	5% 1/4W	
R208	1-249-417-11	CARBON	1K	5% 1/4W	
R209	1-249-405-11	CARBON	100	5% 1/4W	
R210	1-249-433-11	CARBON	22K	5% 1/4W	
R211	1-249-433-11	CARBON	22K	5% 1/4W	
R212	1-249-433-11	CARBON	22K	5% 1/4W	
R213	1-249-433-11	CARBON	22K	5% 1/4W	
R215	1-249-405-11	CARBON	100	5% 1/4W	
R216	1-249-411-11	CARBON	330	5% 1/4W	
R217	1-249-433-11	CARBON	22K	5% 1/4W	
R251	1-249-417-11	CARBON	1K	5% 1/4W	
R252	1-249-417-11	CARBON	1K	5% 1/4W	
R253	1-249-417-11	CARBON	1K	5% 1/4W	
R265	1-249-415-11	CARBON	680	5% 1/4W	
		**********			
	*A-1270-266-A	QF BOARD, COMPLETE (PVM-1440QM ONLY)			
		**********			
	1-537-210-11	TERMINAL BOARD			
	1-537-211-11	TERMINAL BOARD			
	*4-379-104-01	INSULATOR, SLIDE SW			
		<CAPACITOR>			
C101	1-124-589-11	ELECT	47MF	20% 16V	
C102	1-126-160-11	ELECT	1MF	20% 50V	
C103	1-126-160-11	ELECT	1MF	20% 50V	
C105	1-161-021-11	CERAMIC	0.047MF	10% 25V	
C106	1-126-160-11	ELECT	1MF	20% 50V	
C107	1-126-160-11	ELECT	1MF	20% 50V	
C108	1-124-589-11	ELECT	47MF	20% 16V	
C109	1-124-589-11	ELECT	47MF	20% 16V	
C110	1-126-160-11	ELECT	1MF	20% 50V	

QF QG

REF.NO.	PART NO.	DESCRIPTION			REMARK
C111	1-124-589-11	ELECT	47MF	20%	16V
C112	1-126-160-11	ELECT	1MF	20%	50V
C113	1-124-589-11	ELECT	47MF	20%	16V
C114	1-161-021-11	CERAMIC	0.047MF	10%	25V
C116	1-124-589-11	ELECT	47MF	20%	16V
C117	1-124-589-11	ELECT	47MF	20%	16V
C118	1-124-589-11	ELECT	47MF	20%	16V
C119	1-126-160-11	ELECT	1MF	20%	50V
C120	1-126-160-11	ELECT	1MF	20%	50V
C121	1-126-160-11	ELECT	1MF	20%	50V
C122	1-124-589-11	ELECT	47MF	20%	16V
C123	1-124-589-11	ELECT	47MF	20%	16V
C124	1-124-589-11	ELECT	47MF	20%	16V
C125	1-102-959-00	CERAMIC	22PF	5%	50V
C126	1-126-160-11	ELECT	1MF	20%	50V
C127	1-126-157-11	ELECT	10MF	20%	16V
C128	1-126-157-11	ELECT	10MF	20%	16V
C129	1-126-157-11	ELECT	10MF	20%	16V
C130	1-102-965-00	CERAMIC	39PF	5%	50V
C131	1-126-157-11	ELECT	10MF	20%	16V
C132	1-102-947-00	CERAMIC	10PF	0.5PF	50V
C134	1-102-947-00	CERAMIC	10PF	0.5PF	50V
C135	1-102-947-00	CERAMIC	10PF	0.5PF	50V
C136	1-124-589-11	ELECT	47MF	20%	16V

<DIODE>

D101	8-719-110-08	DIODE RD8.2ES-B2
D102	8-719-110-08	DIODE RD8.2ES-B2

<IC>

IC101	8-759-710-31	IC NJM2243S
IC102	8-759-710-31	IC NJM2243S
IC103	8-759-800-81	IC LA7016

<COIL>

L101	1-410-478-11	INDUCTOR	47UH

<TRANSISTOR>

Q113	8-729-119-78	TRANSISTOR 2SC2785-HFE

<CONNECTOR>

QF6	*1-560-721-21	PLUG, CONNECTOR 2P

<RESISTOR>

R101	1-249-429-11	CARBON	10K	5%	1/4W
R104	1-249-429-11	CARBON	10K	5%	1/4W
R106	1-249-462-11	CARBON	22K	5%	1/4W
R107	1-249-433-11	CARBON	22K	5%	1/4W
R108	1-249-429-11	CARBON	10K	5%	1/4W
R109	1-247-104-00	CARBON	75	5%	1/4W
R112	1-247-104-00	CARBON	75	5%	1/4W
R114	1-249-405-11	CARBON	100	5%	1/4W
R115	1-249-433-11	CARBON	22K	5%	1/4W
R116	1-249-433-11	CARBON	22K	5%	1/4W
R117	1-247-104-00	CARBON	75	5%	1/4W
R118	1-247-104-00	CARBON	75	5%	1/4W
R119	1-249-429-11	CARBON	10K	5%	1/4W
R122	1-249-405-11	CARBON	100	5%	1/4W
R123	1-249-433-11	CARBON	22K	5%	1/4W
R124	1-249-429-11	CARBON	10K	5%	1/4W
R125	1-249-429-11	CARBON	10K	5%	1/4W
R126	1-247-104-00	CARBON	75	5%	1/4W
R127	1-247-104-00	CARBON	75	5%	1/4W
R128	1-247-104-00	CARBON	75	5%	1/4W
R129	1-249-417-11	CARBON	1K	5%	1/4W
R130	1-247-104-00	CARBON	75	5%	1/4W
R131	1-247-804-11	CARBON	75	5%	1/4W
R132	1-247-704-11	CARBON	220	5%	1/4W
R133	1-247-704-11	CARBON	220	5%	1/4W
R134	1-249-429-11	CARBON	10K	5%	1/4W
R135	1-249-414-11	CARBON	560	5%	1/4W
R136	1-247-704-11	CARBON	220	5%	1/4W
R138	1-249-409-11	CARBON	220	5%	1/4W
R141	1-249-433-11	CARBON	22K	5%	1/4W
R142	1-249-429-11	CARBON	10K	5%	1/4W
R148	1-249-433-11	CARBON	22K	5%	1/4W
R149	1-249-433-11	CARBON	22K	5%	1/4W
R154	1-249-433-11	CARBON	22K	5%	1/4W
R155	1-249-433-11	CARBON	22K	5%	1/4W
R187	1-249-405-11	CARBON	100	5%	1/4W
R201	1-247-104-00	CARBON	75	5%	1/4W
R202	1-249-433-11	CARBON	22K	5%	1/4W
R206	1-249-419-11	CARBON	1.5K	5%	1/4W
R207	1-249-401-11	CARBON	47	5%	1/4W

<VARIABLE RESISTOR>

RV101	1-228-848-00	RES, VAR, CARBON 10K

<SWITCH>

S101	1-570-145-11	SWITCH, SLIDE
S102	1-570-145-11	SWITCH, SLIDE

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*A-1270-267-A QG BOARD, COMPLETE (PVM-1440QM ONLY)

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<CAPACITOR>

C137	1-124-477-11	ELECT	47MF	20%	25V
C138	1-124-477-11	ELECT	47MF	20%	25V
C139	1-101-004-00	CERAMIC	0.01MF		50V
C140	1-123-875-11	ELECT	10MF	20%	50V
C142	1-124-477-11	ELECT	47MF	20%	25V
C143	1-124-477-11	ELECT	47MF	20%	16V
C144	1-124-477-11	ELECT	47MF	20%	25V
C145	1-124-477-11	ELECT	47MF	20%	25V
C146	1-123-875-11	ELECT	10MF	20%	50V
C147	1-124-477-11	ELECT	47MF	20%	25V
C148	1-123-875-11	ELECT	10MF	20%	50V
C149	1-124-499-11	ELECT	1MF	20%	50V
C150	1-123-875-11	ELECT	10MF	20%	50V
C152	1-124-471-00	ELECT	1000MF	20%	6.3V
C153	1-124-499-11	ELECT	1MF	20%	50V
C154	1-124-477-11	ELECT	47MF	20%	25V
C155	1-102-971-00	CERAMIC	82PF	5%	50V
C156	1-101-880-00	CERAMIC	47PF	5%	50V
C157	1-124-477-11	ELECT	47MF	20%	25V
C159	1-124-477-11	ELECT	47MF	20%	25V
C161	1-124-477-11	ELECT	47MF	20%	25V

REF.NO.	PART NO.	DESCRIPTION			REMARK
C171	1-101-004-00	CERAMIC	0.01MF	50V	
C172	1-124-120-11	ELECT	220MF 20%	25V	
		<DIODE>			
D103	8-719-911-19	DIODE 1SS119			
D104	8-719-911-19	DIODE 1SS119			
D106	8-719-911-19	DIODE 1SS119			
D107	8-719-911-19	DIODE 1SS119			
D108	8-719-109-92	DIODE RD6.2ES-B1			
D109	8-719-110-30	DIODE RD12ES-B1			
D111	8-719-911-19	DIODE 1SS119			
D112	8-719-911-19	DIODE 1SS119			
D113	8-719-911-19	DIODE 1SS119			
		<IC>			
IC104	8-759-800-81	IC LA7016			
IC105	8-759-800-81	IC LA7016			
IC108	8-759-800-81	IC LA7016			
		<COIL>			
L111	1-408-413-00	INDUCTOR	22UH		
		<TRANSISTOR>			
Q101	8-729-900-36	TRANSISTOR DTC124ES			
Q102	8-729-119-78	TRANSISTOR 2SC2785-HFE			
Q103	8-729-119-78	TRANSISTOR 2SC2785-HFE			
Q105	8-729-177-42	TRANSISTOR 2SD774-3			
Q106	8-729-177-42	TRANSISTOR 2SD774-3			
Q107	8-729-119-76	TRANSISTOR 2SA1175-HFE			
Q108	8-729-119-78	TRANSISTOR 2SC2785-HFE			
Q109	8-729-900-36	TRANSISTOR DTC124ES			
Q111	8-729-900-36	TRANSISTOR DTC124ES			
Q112	8-729-900-65	TRANSISTOR DTA144ES			
Q114	8-729-900-65	TRANSISTOR DTA144ES			
		<RESISTOR>			
R120	1-249-417-11	CARBON	1K	5%	1/4W
R121	1-249-405-11	CARBON	100	5%	1/4W
R137	1-247-104-00	CARBON	75	5%	1/4W
R139	1-249-429-11	CARBON	10K	5%	1/4W
R143	1-249-412-11	CARBON	390	5%	1/4W
R144	1-249-405-11	CARBON	100	5%	1/4W
R145	1-249-436-11	CARBON	39K	5%	1/4W
R146	1-249-435-11	CARBON	33K	5%	1/4W
R150	1-249-405-11	CARBON	100	5%	1/4W
R151	1-249-433-11	CARBON	22K	5%	1/4W
R152	1-249-433-11	CARBON	22K	5%	1/4W
R153	1-249-405-11	CARBON	100	5%	1/4W
R156	1-249-417-11	CARBON	1K	5%	1/4W
R157	1-249-433-11	CARBON	22K	5%	1/4W
R158	1-249-433-11	CARBON	22K	5%	1/4W
R161	1-249-438-11	CARBON	56K	5%	1/4W
R162	1-249-405-11	CARBON	100	5%	1/4W
R163	1-249-417-11	CARBON	1K	5%	1/4W
R164	1-249-435-11	CARBON	33K	5%	1/4W
R165	1-249-405-11	CARBON	100	5%	1/4W
R166	1-249-433-11	CARBON	22K	5%	1/4W
R167	1-249-433-11	CARBON	22K	5%	1/4W
R172	1-249-405-11	CARBON	100	5%	1/4W

REF.NO.	PART NO.	DESCRIPTION				REMARK
R173	1-215-397-00	METAL	100	1%	1/6W	
R174	1-215-399-00	METAL	120	1%	1/6W	
R175	1-215-397-00	METAL	100	1%	1/6W	
R176	1-215-865-11	METAL OXIDE	220	5%	1W	F
R177	1-247-695-11	CARBON	39	5%	1/4W	
R178	1-249-412-11	CARBON	390	5%	1/4W	
R179	1-249-435-11	CARBON	33K	5%	1/4W	
R180	1-249-434-11	CARBON	27K	5%	1/4W	
R181	1-249-414-11	CARBON	560	5%	1/4W	
R182	1-249-419-11	CARBON	1.5K	5%	1/4W	
R183	1-249-413-11	CARBON	470	5%	1/4W	
R184	1-249-413-11	CARBON	470	5%	1/4W	
R185	1-249-434-11	CARBON	27K	5%	1/4W	
R186	1-249-428-11	CARBON	8.2K	5%	1/4W	
R188	1-249-429-11	CARBON	10K	5%	1/4W	
R189	1-249-429-11	CARBON	10K	5%	1/4W	
R190	1-249-429-11	CARBON	10K	5%	1/4W	
R191	1-249-417-11	CARBON	1K	5%	1/4W	
R192	1-249-433-11	CARBON	22K	5%	1/4W	
R193	1-249-433-11	CARBON	22K	5%	1/4W	
R198	1-215-413-00	METAL	470	1%	1/6W	
R199	1-215-413-00	METAL	470	1%	1/6W	
R200	1-215-413-00	METAL	470	1%	1/6W	
R203	1-249-433-11	CARBON	22K	5%	1/4W	
R204	1-249-434-11	CARBON	27K	5%	1/4W	
R205	1-249-415-11	CARBON	680	5%	1/4W	

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*A-1296-520-A	A BOARD, COMPLETE	
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*4-329-153-00	HEAT SINK, V OUT	
*4-341-751-01	EYELET	
*4-341-752-01	EYELET	
*4-363-404-00	HOLDER, IC	
4-363-414-00	SPACER, MICA	
	<CONNECTOR>	
A1 *1-508-768-00	PIN, CONNECTOR (5MM PITCH) 6P	
A2 *1-560-123-00	PLUG, CONNECTOR (2.5MM) 3P	
A3 *1-565-498-11	CONNECTOR, BOARD TO BOARD 7P	
A4 *1-564-596-11	PLUG, CONNECTOR 15P	
A5 *1-564-596-11	PLUG, CONNECTOR 15P	
A6 *1-565-497-11	CONNECTOR, BOARD TO BOARD 6P	
A7 *1-565-498-11	CONNECTOR, BOARD TO BOARD 7P	
A8 *1-565-506-11	CONNECTOR, BOARD TO BOARD 15P	
A9 *1-565-506-11	CONNECTOR, BOARD TO BOARD 15P	
A10 *1-564-596-11	PLUG, CONNECTOR 15P	
A11 *1-564-596-41	PLUG, CONNECTOR 15P	
A13 *1-568-105-11	HOUSING, CONNECTOR 10P	
A14 *1-568-105-11	HOUSING, CONNECTOR 10P	
A16 *1-560-123-00	PLUG, CONNECTOR (2.5MM) 3P	
A17 *1-565-496-11	CONNECTOR, BOARD TO BOARD 5P	
A18 *1-564-038-00	CONNECTOR PLUG, DY (MINI) 6P	
A19 *1-508-768-00	PIN, CONNECTOR (5MM PITCH) 6P	
A20 *1-564-507-11	PLUG, CONNECTOR 4P	
A22 *1-564-505-11	PLUG, CONNECTOR 2P	
	<CAPACITOR>	
C300 1-123-875-11	ELECT 10MF 20%	50V
C301 1-124-477-11	ELECT 47MF 20%	25V
C302 1-101-884-00	CERAMIC 56PF 5%	50V
C303 1-136-173-00	FILM 0.47MF 5%	50V

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

A

REF.NO.	PART NO.	DESCRIPTION				REMARK
C304	1-101-884-00	CERAMIC	56PF	5%	50V	
C305	1-136-173-00	FILM	0.47MF	5%	50V	
C306	1-102-125-00	CERAMIC	0.0047MF	10%	50V	
C307	1-124-477-11	ELECT	47MF	20%	25V	
C308	1-124-477-11	ELECT	47MF	20%	25V	
C309	1-102-125-00	CERAMIC	0.0047MF	10%	50V	
C310	1-102-125-00	CERAMIC	0.0047MF	10%	50V	
C311	1-102-125-00	CERAMIC	0.0047MF	10%	50V	
C312	1-123-875-11	ELECT	10MF	20%	50V	
C313	1-102-074-00	CERAMIC	0.001MF	10%	50V	
C314	1-102-074-00	CERAMIC	0.001MF	10%	50V	
C315	1-124-927-11	ELECT	4.7MF	20%	50V	
C316	1-136-161-00	FILM	0.047MF	5%	50V	
C317	1-136-161-00	FILM	0.047MF	5%	50V	
C318	1-136-165-00	FILM	0.1MF	5%	50V	
C319	1-101-004-00	CERAMIC	0.01MF		50V	
C320	1-124-499-11	ELECT	1MF	20%	50V	
C321	1-124-477-11	ELECT	47MF	20%	25V	
C322	1-124-902-00	ELECT	0.47MF	20%	50V	
C323	1-101-361-00	CERAMIC	150PF	5%	50V	
C324	1-124-477-11	ELECT	47MF	20%	25V	
C325	1-101-361-00	CERAMIC	150PF	5%	50V	
C326	1-124-477-11	ELECT	47MF	20%	25V	
C327	1-124-477-11	ELECT	47MF	20%	25V	
C328	1-124-009-11	ELECT	47MF	20%	25V	
C329	1-124-477-11	ELECT	47MF	20%	25V	
C330	1-101-880-00	CERAMIC	47PF	5%	50V	
C331	1-101-004-00	CERAMIC	0.01MF		50V	
C332	1-102-971-00	CERAMIC	82PF	5%	50V	
C333	1-136-165-00	FILM	0.1MF	5%	50V	
C334	1-136-173-00	FILM	0.47MF	5%	50V	
C335	1-136-173-00	FILM	0.47MF	5%	50V	
C336	1-102-971-00	CERAMIC	82PF	5%	50V	
C337	1-124-477-11	ELECT	47MF	20%	25V	
C338	1-124-477-11	ELECT	47MF	20%	25V	
C339	1-124-477-11	ELECT	47MF	20%	25V	
C340	1-124-477-11	ELECT	47MF	20%	25V	
C341	1-124-477-11	ELECT	47MF	20%	25V	
C342	1-124-477-11	ELECT	47MF	20%	25V	
C343	1-124-477-11	ELECT	47MF	20%	25V	
C344	1-124-477-11	ELECT	47MF	20%	25V	
C345	1-102-949-00	CERAMIC	12PF	5%	50V	
C346	1-126-233-11	ELECT	22MF	20%	50V	
C347	1-123-875-11	ELECT	10MF	20%	50V	
C348	1-101-004-00	CERAMIC	0.01MF		50V	
C349	1-124-120-11	ELECT	220MF	20%	25V	
C350	1-101-884-00	CERAMIC	56PF	5%	50V	
C351	1-102-106-00	CERAMIC	100PF	10%	50V	
C352	1-102-125-00	CERAMIC	0.0047MF	10%	50V	
C353	1-161-021-11	CERAMIC	0.047MF	10%	25V	
C401	1-136-153-00	FILM	0.01MF	5%	50V	
C402	1-136-165-00	FILM	0.1MF	5%	50V	
C403	1-136-165-00	FILM	0.1MF	5%	50V	
C404	1-136-169-00	FILM	0.22MF	5%	50V	
C405	1-136-169-00	FILM	0.22MF	5%	50V	
C406	1-136-169-00	FILM	0.22MF	5%	50V	
C407	1-124-464-11	ELECT	0.22MF	20%	50V	
C408	1-124-464-11	ELECT	0.22MF	20%	50V	
C409	1-124-464-11	ELECT	0.22MF	20%	50V	
C410	1-124-499-11	ELECT	1MF	20%	50V	
C411	1-124-499-11	ELECT	1MF	20%	50V	
C412	1-124-463-00	ELECT	0.1MF	20%	50V	
C413	1-124-463-00	ELECT	0.1MF	20%	50V	
C414	1-136-165-00	FILM	0.1MF	5%	50V	
C415	1-136-165-00	FILM	0.1MF	5%	50V	
C416	1-126-233-11	ELECT	22MF	20%	50V	
C417	1-136-161-00	FILM	0.047MF	5%	50V	
C418	1-136-153-00	FILM	0.01MF	5%	50V	
C419	1-130-479-00	MYLAR	0.0047MF	5%	50V	
C420	1-136-161-00	FILM	0.047MF	5%	50V	
C421	1-136-153-00	FILM	0.01MF	5%	50V	
C422	1-130-479-00	MYLAR	0.0047MF	5%	50V	
C423	1-136-153-00	FILM	0.01MF	5%	50V	
C424	1-130-479-00	MYLAR	0.0047MF	5%	50V	
C425	1-124-478-11	ELECT	100MF	20%	25V	
C426	1-136-161-00	FILM	0.047MF	5%	50V	
C427	1-124-478-11	ELECT	100MF	20%	25V	
C428	1-124-478-11	ELECT	100MF	20%	25V	
C430	1-101-888-00	CERAMIC	68PF	5%	50V	
C431	1-101-888-00	CERAMIC	68PF	5%	50V	
C470	1-124-120-11	ELECT	220MF	20%	25V	
C471	1-124-120-11	ELECT	220MF	20%	25V	
C472	1-101-004-00	CERAMIC	0.01MF		50V	
C473	1-124-478-11	ELECT	100MF	20%	25V	
C474	1-101-004-00	CERAMIC	0.01MF		50V	
C475	1-101-004-00	CERAMIC	0.01MF		50V	
C476	1-101-888-00	CERAMIC	68PF	5%	50V	
C477	1-101-006-00	CERAMIC	0.047MF		50V	
C478	1-101-004-00	CERAMIC	0.01MF		50V	
C479	1-124-478-11	ELECT	100MF	20%	25V	
C480	1-101-004-00	CERAMIC	0.01MF		50V	
C481	1-101-004-00	CERAMIC	0.01MF		50V	
C482	1-124-478-11	ELECT	100MF	20%	25V	
C483	1-124-120-11	ELECT	220MF	20%	25V	
C484	1-101-004-00	CERAMIC	0.01MF		50V	
C485	1-124-478-11	ELECT	100MF	20%	25V	
C486	1-101-004-00	CERAMIC	0.01MF		50V	
C487	1-101-004-00	CERAMIC	0.01MF		50V	
C488	1-124-120-11	ELECT	220MF	20%	25V	
C489	1-124-927-11	ELECT	4.7MF	20%	50V	
C491	1-101-004-00	CERAMIC	0.01MF		50V	
C492	1-124-120-11	ELECT	220MF	20%	25V	
C493	1-101-004-00	CERAMIC	0.01MF		50V	
C494	1-124-120-11	ELECT	220MF	20%	25V	
C495	1-101-880-00	CERAMIC	47PF	5%	50V	
C496	1-124-478-11	ELECT	100MF	20%	25V	
C497	1-124-120-11	ELECT	220MF	20%	25V	
C498	1-124-925-11	ELECT	2.2MF	20%	50V	
C500	1-101-884-00	CERAMIC	56PF	5%	50V	
C501	1-124-120-11	ELECT	220MF	20%	25V	
C502	1-124-927-11	ELECT	4.7MF	20%	50V	
C503	1-124-927-11	ELECT	4.7MF	20%	50V	
C504	1-102-114-00	CERAMIC	470PF	10%	50V	
C505	1-123-875-11	ELECT	10MF	20%	50V	
C506	1-136-298-00	FILM	0.0033MF	5%	100V	
C507	1-106-351-00	MYLAR	0.0022MF	5%	100V	
C508	1-108-626-11	MYLAR	0.01MF	10%	100V	
C509	1-106-375-12	MYLAR	0.022MF	10%	100V	
C510	1-108-626-11	MYLAR	0.01MF	10%	100V	
C511	1-124-902-00	ELECT	0.47MF	20%	50V	
C512	1-102-030-00	CERAMIC	330PF	10%	500V	
C513	1-129-720-00	FILM	0.033MF	5%	630V	
C514 ⚠	1-136-078-11	FILM	0.0098MF	3%	2KV	
C515 ⚠	1-162-116-51	CERAMIC	680PF	10%	2KV	
C516 ⚠	1-162-116-51	CERAMIC	680PF	10%	2KV	
C517	1-108-692-11	MYLAR	0.01MF	10%	200V	
C518	1-126-104-11	ELECT	470MF	20%	35V	

REF.NO.	PART NO.	DESCRIPTION			REMARK
C519	1-124-120-11	ELECT	220MF	20%	25V
C520	1-124-494-00	ELECT	33MF		160V
C521	1-102-212-00	CERAMIC	820PF	10%	500V
C522	1-102-212-00	CERAMIC	820PF	10%	500V
C523	1-162-114-00	CERAMIC	0.0047MF		2KV
C524	1-108-700-11	MYLAR	0.047MF	10%	200V
C525	1-108-634-11	MYLAR	0.047MF	10%	100V
C526	1-124-477-11	ELECT	47MF	20%	25V
C527	1-124-902-00	ELECT	0.47MF	20%	50V
C528	1-124-902-00	ELECT	0.47MF	20%	50V
C529	1-126-233-11	ELECT	22MF	20%	50V
C530	1-123-875-11	ELECT	10MF	20%	50V
C531	1-131-351-00	TANTALUM	4.7MF	10%	35V
C532	1-123-948-00	ELECT	22MF	20%	250V
C533	1-136-111-00	FILM	1MF	5%	200V
C534	1-106-399-00	MYLAR	0.22MF	10%	200V
C535	1-123-946-00	ELECT	4.7MF	20%	250V
C536	1-136-111-00	FILM	1MF	5%	200V
C537	1-102-002-00	CERAMIC	680PF	10%	500V
C538	1-108-626-11	MYLAR	0.01MF	10%	100V
C539	1-108-626-11	MYLAR	0.01MF	10%	100V
C540	1-106-347-00	MYLAR	0.0015MF	10%	100V
C541	1-124-045-00	ELECT	4.7MF	20%	50V
C542	1-123-875-11	ELECT	10MF	20%	50V
C543	1-124-927-11	ELECT	4.7MF	20%	50V
C544	1-124-190-00	ELECT	680MF	10%	25V
C545	1-106-371-00	MYLAR	0.015MF	10%	200V
C546	1-102-030-00	CERAMIC	330PF	10%	500V
C547	1-124-342-00	ELECT	3.3MF	20%	160V
C548	1-102-030-00	CERAMIC	330PF	10%	500V
C549	1-123-875-11	ELECT	10MF	20%	50V
C550	1-102-244-00	CERAMIC	220PF	10%	500V
C551	1-124-360-00	ELECT	1000MF	20%	16V
C552	1-124-499-11	ELECT	1MF	20%	50V
C553	1-108-626-11	MYLAR	0.01MF	10%	100V
C554	1-124-499-11	ELECT	1MF	20%	50V
C555	1-108-633-11	MYLAR	0.039MF	10%	100V
C556	1-136-173-00	FILM	0.47MF	5%	50V
C557	1-124-902-00	ELECT	0.47MF	20%	50V
C558	1-131-356-00	TANTALUM	3.3MF	10%	25V
C559	1-123-875-11	ELECT	10MF	20%	50V
C560	1-136-161-00	FILM	0.047MF	5%	50V
C561	1-102-973-00	CERAMIC	100PF	5%	50V
C562	1-130-471-00	FILM	0.001MF	5%	50V
C563	1-123-875-11	ELECT	10MF	20%	50V
C564	1-102-978-00	CERAMIC	220PF	5%	50V
C565	1-124-478-11	ELECT	100MF	20%	25V
C566	1-124-499-11	ELECT	1MF	20%	50V
C567	1-123-875-11	ELECT	10MF	20%	50V
C568	1-108-614-11	MYLAR	0.001MF	10%	100V
C569	1-130-736-11	FILM	0.01MF	5%	50V
C570	1-123-875-11	ELECT	10MF	20%	50V
C571	1-126-233-11	ELECT	22MF	20%	25V
C572	1-124-499-11	ELECT	1MF	20%	50V
C573	1-123-875-11	ELECT	10MF	20%	50V
C574	1-124-478-11	ELECT	100MF	20%	25V
C575	1-102-978-00	CERAMIC	220PF	5%	50V
C576	1-161-021-11	CERAMIC	0.047MF	10%	25V
C577	1-123-875-11	ELECT	10MF	20%	50V
C578	1-124-477-11	ELECT	47MF	20%	25V
C579	1-124-477-11	ELECT	47MF	20%	25V
C580	1-124-499-11	ELECT	1MF	20%	50V
C581	1-124-478-11	ELECT	100MF	20%	25V
C583	1-126-233-11	ELECT	22MF	20%	50V
C584	1-126-233-11	ELECT	22MF	20%	50V
C585	1-102-110-00	CERAMIC	220PF	10%	50V
C590	1-126-233-11	ELECT	22MF	20%	50V
C591	1-124-925-11	ELECT	2.2MF	20%	50V
C801	1-101-004-00	CERAMIC	0.01MF		50V
C802	1-101-361-00	CERAMIC	150PF	5%	50V
C803	1-102-976-00	CERAMIC	180PF	5%	50V
C804	1-126-233-11	ELECT	22MF	20%	50V
C805	1-102-125-00	CERAMIC	0.0047MF	10%	50V
C806	1-101-884-00	CERAMIC	56PF	5%	50V
C807	1-130-736-11	FILM	0.01MF	5%	50V
C808	1-124-120-11	ELECT	220MF	20%	25V
C809	1-101-004-00	CERAMIC	0.01MF		50V
C810	1-108-620-11	MYLAR	0.0033MF	10%	100V
C811	1-124-927-11	ELECT	4.7MF	20%	50V
C1001	1-124-478-11	ELECT	100MF	20%	25V
C1002	1-123-875-11	ELECT	10MF	20%	50V
C1003	1-102-125-00	CERAMIC	0.0047MF	10%	50V
C1004	1-124-464-11	ELECT	0.22MF	20%	50V
C1005	1-123-875-11	ELECT	10MF	20%	50V
C1006	1-123-875-11	ELECT	10MF	20%	50V
C1007	1-108-634-11	MYLAR	0.047MF	10%	100V
C1008	1-124-478-11	ELECT	100MF	20%	25V
C1009	1-124-480-11	ELECT	470MF	20%	25V
C1010	1-124-478-11	ELECT	100MF	20%	25V
C1011	1-124-477-11	ELECT	47MF	20%	25V
C1012	1-124-120-11	ELECT	220MF	20%	25V
C1013	1-124-478-11	ELECT	100MF	20%	25V

<DIODE>

D302	8-719-911-19	DIODE 1SS119
D303	8-719-911-19	DIODE 1SS119
D304	8-719-911-19	DIODE 1SS119
D305	8-719-911-19	DIODE 1SS119
D306	8-719-911-19	DIODE 1SS119
D307	8-719-911-19	DIODE 1SS119
D308	8-719-911-19	DIODE 1SS119
D309	8-719-911-19	DIODE 1SS119
D311	8-719-911-19	DIODE 1SS119
D312	8-719-911-19	DIODE 1SS119
D313	8-719-911-19	DIODE 1SS119
D314	8-719-911-19	DIODE 1SS119
D400	8-719-121-40	DIODE RD10ES-L3
D401	8-719-911-19	DIODE 1SS119
D402	8-719-120-27	DIODE RD4.3ES-L2
D403	8-719-109-93	DIODE RD6.2ES-B2
D404	8-719-911-19	DIODE 1SS119
D405	8-719-911-19	DIODE 1SS119
D501	8-719-911-19	DIODE 1SS119
D502	8-719-971-20	DIODE ERC38-06
D503	8-719-971-20	DIODE ERC38-06
D504	8-719-901-58	DIODE RGP15J
D505	8-719-901-58	DIODE RGP15J
D506	8-719-901-19	DIODE V11N
D507	8-719-945-80	DIODE ERC06-15S
D508	8-719-928-08	DIODE ERD28-08S
D509	8-719-100-35	DIODE RD5.6E-B2
D510	8-719-190-00	DIODE RD24E-BZ7
D511	8-719-200-02	DIODE 10E2
D512	8-719-200-02	DIODE 10E2
D513	8-719-911-19	DIODE 1SS119
D514	8-719-300-76	DIODE RH-1Z

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

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REF.NO.	PART NO.	DESCRIPTION	REMARK
D515	8-719-300-76	DIODE RH-1Z	
D516	8-719-200-02	DIODE 10E2	
D517	8-719-911-19	DIODE 1SS119	
D518	8-719-200-02	DIODE 10E2	
D519	8-719-911-19	DIODE 1SS119	
D520	8-719-911-19	DIODE 1SS119	
D521	8-719-911-19	DIODE 1SS119	
D522	8-719-911-19	DIODE 1SS119	
D523	8-719-911-19	DIODE 1SS119	
D524	8-719-911-19	DIODE 1SS119	
D526	8-719-911-19	DIODE 1SS119	
D527	8-719-911-19	DIODE 1SS119	
D528	8-719-911-19	DIODE 1SS119	
D529	8-719-911-19	DIODE 1SS119	
D530	8-719-901-83	DIODE 1SS83	
D531	8-719-911-19	DIODE 1SS119	
D801	8-719-911-19	DIODE 1SS119	
D802	8-719-911-19	DIODE 1SS119	
D1001	8-719-911-19	DIODE 1SS119	
D1002	8-719-911-19	DIODE 1SS119	
D1003	8-719-911-19	DIODE 1SS119	
D1010	8-719-120-64	DIODE RD5.6ES-L1	
D1011	8-719-110-08	DIODE RD8.2ES-B2	
D1012	8-719-911-55	DIODE U05G	
D1013	8-719-110-37	DIODE RD13ES-B3	
D1014	8-719-936-56	DIODE DAN209S	
		<DELAY LINE>	
DL301	1-415-633-11	DELAY LINE, Y	
		<IC>	
IC301	8-759-204-21	IC TA7193P	
IC302	1-808-627-11	ACC BLOCK ACC-1	
IC303	8-759-710-31	IC NJM2243S	
IC304	1-235-534-11	CONTROL MODULE, PICTURE	
IC305	8-749-920-72	IC BX-7573	
IC306	8-759-420-08	IC AN5613	
IC307	1-808-629-11	MODULE, BLUE ONLY BOM-1	
IC308	1-808-626-11	MODULE, GAIN/BIAS GBM-1	
IC309	8-759-240-52	IC TC4052BP	
IC311	8-759-800-81	IC LA7016	
IC312	8-759-800-81	IC LA7016	
IC401	8-752-030-31	IC CXA1024S	
IC501	8-759-100-60	IC UPC1377C	
IC502	8-759-145-58	IC UPC4558C	
IC503	8-749-920-74	IC BX7574	
IC504	8-759-345-38	IC HD14538BP	
IC505	8-759-700-06	IC NJM7812B	
IC1001	8-759-420-04	IC AN5265	
		<COIL>	
L300	1-410-470-11	INDUCTOR 10UH	
L301	1-410-470-11	INDUCTOR 10UH	
L302	1-410-470-11	INDUCTOR 10UH	
L303	1-410-471-11	INDUCTOR 12UH	
L304	1-408-406-00	INDUCTOR 5.6UH	
L306	1-410-470-11	INDUCTOR 10UH	
L307	1-408-406-00	INDUCTOR 5.6UH	
L495	1-421-013-00	COIL, (HOLIZONTAL CHOKE) 25UH	
L501	1-459-155-00	COIL (WITH CORE) 45UH	
L502	1-410-671-31	INDUCTOR 47UH	
L503	1-410-666-31	INDUCTOR 18UH	
L504	1-407-365-00	COIL, CHOKE	
L505	1-407-365-00	COIL, CHOKE	
L506	1-408-238-00	INDUCTOR 3.9MMH	
L507	1-459-155-00	COIL (WITH CORE) 45UH	
L508 ⚠	1-459-496-12	COIL, FERRITE (HLC)	
L509	1-459-106-00	COIL, DUST CORE	
L510	1-459-075-00	COIL, DYNAMIC CONVERSION CHOKE	
L511	1-459-059-00	COIL, DUST CORE	
L512	1-408-247-00	INDUCTOR 33MMH	
L513	1-459-104-00	COIL, DUST CORE	
L514	1-410-686-11	INDUCTOR 1MMH	
L515	1-410-510-11	INDUCTOR 12UH	
L801	1-410-470-11	INDUCTOR 10UH	
L802	1-410-089-21	INDUCTOR 15MMH	
		<NEON LAMP>	
NL501	1-519-108-XX	LAMP, NEON	
		<TRANSISTOR>	
Q300	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q301	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q302	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q303	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q304	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q305	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q306	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q307	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q308	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q309	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q310	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q311	8-729-900-89	TRANSISTOR DTC144ES	
Q312	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q313	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q314	8-729-900-65	TRANSISTOR DTA144ES	
Q315	8-729-900-89	TRANSISTOR DTC144ES	
Q316	8-729-900-89	TRANSISTOR DTC144ES	
Q317	8-729-900-89	TRANSISTOR DTC144ES	
Q318	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q319	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q320	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q321	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q322	8-729-900-89	TRANSISTOR DTC144ES	
Q323	8-729-900-89	TRANSISTOR DTC144ES	
Q324	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q325	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q326	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q327	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q328	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q329	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q330	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q331	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q332	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q333	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q334	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q335	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q336	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q337	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q338	8-729-900-89	TRANSISTOR DTC144ES	
Q400	8-729-177-33	TRANSISTOR 2SD773-4	
Q401	8-729-900-36	TRANSISTOR DTC124ES	

REF.NO.	PART NO.	DESCRIPTION	REMARK
Q402	8-729-900-36	TRANSISTOR DTC124ES	
Q403	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q404	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q405	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q406	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q407	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q408	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q409	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q410	8-729-900-89	TRANSISTOR DTC144ES	
Q411	8-729-900-89	TRANSISTOR DTC144ES	
Q412	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q413	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q414	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q415	8-729-900-36	TRANSISTOR DTC124ES	
Q416	8-729-900-36	TRANSISTOR DTC124ES	
Q501	8-729-800-35	TRANSISTOR 2SD1397-CA	
Q502	8-729-119-80	TRANSISTOR 2SC2688-K	
Q503	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q504	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q505	8-729-309-08	TRANSISTOR 2SC1890A	
Q506	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q507	8-729-313-42	TRANSISTOR 2SD1134-C	
Q508	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q509	8-729-195-82	TRANSISTOR 2SC2958-L	
Q510	8-729-122-03	TRANSISTOR 2SA1220A-Q	
Q511	8-729-169-02	TRANSISTOR 2SC2690A-Q	
Q512	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q513	8-729-900-63	TRANSISTOR DTA124ES	
Q514	8-729-900-36	TRANSISTOR DTC124ES	
Q515	8-729-900-36	TRANSISTOR DTC124ES	
Q516	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q517	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q518	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q519	8-729-900-36	TRANSISTOR DTC124ES	
Q520	8-729-900-63	TRANSISTOR DTA124ES	
Q521	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q522	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q523	8-729-900-36	TRANSISTOR DTC124ES	
Q524	8-729-900-63	TRANSISTOR DTA124ES	
Q525	8-729-900-36	TRANSISTOR DTC124ES	
Q526	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q528	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q529	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q530	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q531	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q532	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q533	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q534	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q550	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q551	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q801	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q802	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q803	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q804	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q805	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q806	8-729-900-36	TRANSISTOR DTC124ES	
Q807	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1001	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q1002	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q1003	8-729-177-42	TRANSISTOR 2SD774-3	
Q1004	8-729-177-42	TRANSISTOR 2SD774-3	
Q1005	8-729-122-03	TRANSISTOR 2SA1220A-P	
Q1006	8-729-119-78	TRANSISTOR 2SC2785-HFE	

<RESISTOR>

REF.NO.	PART NO.	DESCRIPTION				REMARK
R300	1-249-405-11	CARBON	100	5%	1/4W	
R301	1-249-405-11	CARBON	100	5%	1/4W	
R302	1-247-721-11	CARBON	4.7K	5%	1/4W	
R303	1-249-426-11	CARBON	5.6K	5%	1/4W	
R304	1-249-421-11	CARBON	2.2K	5%	1/4W	
R305	1-249-429-11	CARBON	10K	5%	1/4W	
R306	1-249-405-11	CARBON	100	5%	1/4W	
R307	1-247-887-00	CARBON	220K	5%	1/4W	
R308	1-249-429-11	CARBON	10K	5%	1/4W	
R309	1-249-405-11	CARBON	100	5%	1/4W	
R310	1-247-887-00	CARBON	220K	5%	1/4W	
R311	1-249-435-11	CARBON	33K	5%	1/4W	
R312	1-249-431-11	CARBON	15K	5%	1/4W	
R313	1-249-405-11	CARBON	100	5%	1/4W	
R314	1-249-405-11	CARBON	100	5%	1/4W	
R315	1-249-413-11	CARBON	470	5%	1/4W	
R316	1-249-413-11	CARBON	470	5%	1/4W	
R317	1-249-414-11	CARBON	560	5%	1/4W	
R318	1-249-422-11	CARBON	2.7K	5%	1/4W	
R319	1-249-416-11	CARBON	820	5%	1/4W	
R320	1-249-415-11	CARBON	680	5%	1/4W	
R321	1-249-411-11	CARBON	330	5%	1/4W	
R322	1-249-409-11	CARBON	220	5%	1/4W	
R323	1-249-409-11	CARBON	220	5%	1/4W	
R324	1-249-417-11	CARBON	1K	5%	1/4W	
R325	1-249-405-11	CARBON	100	5%	1/4W	
R326	1-249-409-11	CARBON	220	5%	1/4W	
R327	1-249-417-11	CARBON	1K	5%	1/4W	
R328	1-249-434-11	CARBON	27K	5%	1/4W	
R329	1-249-433-11	CARBON	22K	5%	1/4W	
R330	1-249-433-11	CARBON	22K	5%	1/4W	
R331	1-249-433-11	CARBON	22K	5%	1/4W	
R332	1-249-405-11	CARBON	100	5%	1/4W	
R333	1-249-435-11	CARBON	33K	5%	1/4W	
R334	1-249-432-11	CARBON	18K	5%	1/4W	
R335	1-247-700-11	CARBON	100	5%	1/4W	
R336	1-249-417-11	CARBON	1K	5%	1/4W	
R337	1-249-410-11	CARBON	270	5%	1/4W	
R338	1-249-421-11	CARBON	2.2K	5%	1/4W	
R339	1-249-405-11	CARBON	100	5%	1/4W	
R340	1-249-434-11	CARBON	27K	5%	1/4W	
R341	1-249-434-11	CARBON	27K	5%	1/4W	
R342	1-249-418-11	CARBON	1.2K	5%	1/4W	
R343	1-249-440-11	CARBON	82K	5%	1/4W	
R344	1-249-428-11	CARBON	8.2K	5%	1/4W	
R345	1-249-416-11	CARBON	820	5%	1/4W	
R346	1-249-416-11	CARBON	820	5%	1/4W	
R347	1-249-421-11	CARBON	2.2K	5%	1/4W	
R348	1-249-421-11	CARBON	2.2K	5%	1/4W	
R349	1-249-417-11	CARBON	1K	5%	1/4W	
R350	1-249-425-11	CARBON	4.7K	5%	1/4W	
R351	1-249-421-11	CARBON	2.2K	5%	1/4W	
R352	1-247-891-00	CARBON	330K	5%	1/4W	
R353	1-249-428-11	CARBON	8.2K	5%	1/4W	
R354	1-249-424-11	CARBON	3.9K	5%	1/4W	
R355	1-249-434-11	CARBON	27K	5%	1/4W	
R356	1-249-437-11	CARBON	47K	5%	1/4W	
R357	1-249-437-11	CARBON	47K	5%	1/4W	
R358	1-249-433-11	CARBON	22K	5%	1/4W	
R359	1-249-417-11	CARBON	1K	5%	1/4W	
R360	1-249-413-11	CARBON	470	5%	1/4W	

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REF.NO.	PART NO.	DESCRIPTION				REMARK
R361	1-249-405-11	CARBON	100	5%	1/4W	
R362	1-249-410-11	CARBON	270	5%	1/4W	
R363	1-249-432-11	CARBON	18K	5%	1/4W	
R364	1-249-417-11	CARBON	1K	5%	1/4W	
R365	1-249-432-11	CARBON	18K	5%	1/4W	
R366	1-249-437-11	CARBON	47K	5%	1/4W	
R367	1-249-413-11	CARBON	470	5%	1/4W	
R368	1-249-405-11	CARBON	100	5%	1/4W	
R369	1-249-405-11	CARBON	100	5%	1/4W	
R370	1-249-417-11	CARBON	1K	5%	1/4W	
R371	1-249-432-11	CARBON	18K	5%	1/4W	
R372	1-249-465-11	CARBON	47K	5%	1/4W	
R373	1-249-436-11	CARBON	39K	5%	1/4W	
R374	1-249-432-11	CARBON	18K	5%	1/4W	
R375	1-249-405-11	CARBON	100	5%	1/4W	
R376	1-249-417-11	CARBON	1K	5%	1/4W	
R377	1-249-428-11	CARBON	8.2K	5%	1/4W	
R378	1-249-433-11	CARBON	22K	5%	1/4W	
R379	1-249-430-11	CARBON	12K	5%	1/4W	
R380	1-249-405-11	CARBON	100	5%	1/4W	
R381	1-249-431-11	CARBON	15K	5%	1/4W	
R382	1-249-408-11	CARBON	180	5%	1/4W	
R383	1-249-413-11	CARBON	470	5%	1/4W	
R384	1-249-413-11	CARBON	470	5%	1/4W	
R385	1-249-411-11	CARBON	330	5%	1/4W	
R386	1-249-415-11	CARBON	680	5%	1/4W	
R387	1-249-405-11	CARBON	100	5%	1/4W	
R388	1-249-423-11	CARBON	3.3K	5%	1/4W	
R389	1-249-417-11	CARBON	1K	5%	1/4W	
R390	1-249-433-11	CARBON	22K	5%	1/4W	
R391	1-249-433-11	CARBON	22K	5%	1/4W	
R392	1-249-433-11	CARBON	22K	5%	1/4W	
R393	1-249-403-11	CARBON	68	5%	1/4W	
R394	1-249-409-11	CARBON	220	5%	1/4W	
R395	1-249-417-11	CARBON	1K	5%	1/4W	
R396	1-249-433-11	CARBON	22K	5%	1/4W	
R397	1-249-405-11	CARBON	100	5%	1/4W	
R398	1-249-405-11	CARBON	100	5%	1/4W	
R399	1-247-718-11	CARBON	2.7K	5%	1/4W	
R400	1-249-413-11	CARBON	470	5%	1/4W	
R401	1-249-413-11	CARBON	470	5%	1/4W	
R402	1-249-416-11	CARBON	820	5%	1/4W	
R403	1-249-411-11	CARBON	330	5%	1/4W	
R404	1-249-405-11	CARBON	100	5%	1/4W	
R405	1-249-422-11	CARBON	2.7K	5%	1/4W	
R406	1-249-413-11	CARBON	470	5%	1/4W	
R407	1-249-413-11	CARBON	470	5%	1/4W	
R408	1-249-416-11	CARBON	820	5%	1/4W	
R409	1-249-411-11	CARBON	330	5%	1/4W	
R410	1-249-405-11	CARBON	100	5%	1/4W	
R411	1-249-422-11	CARBON	2.7K	5%	1/4W	
R412	1-249-419-11	CARBON	1.5K	5%	1/4W	
R413	1-249-417-11	CARBON	1K	5%	1/4W	
R414	1-249-429-11	CARBON	10K	5%	1/4W	
R415	1-249-417-11	CARBON	1K	5%	1/4W	
R416	1-249-429-11	CARBON	10K	5%	1/4W	
R417	1-249-421-11	CARBON	2.2K	5%	1/4W	
R418	1-249-439-11	CARBON	68K	5%	1/4W	
R419	1-249-433-11	CARBON	22K	5%	1/4W	
R420	1-249-426-11	CARBON	5.6K	5%	1/4W	
R421	1-249-437-11	CARBON	47K	5%	1/4W	
R422	1-249-437-11	CARBON	47K	5%	1/4W	
R423	1-249-405-11	CARBON	100	5%	1/4W	
R424	1-249-437-11	CARBON	47K	5%	1/4W	
R425	1-249-437-11	CARBON	47K	5%	1/4W	
R426	1-249-434-11	CARBON	27K	5%	1/4W	
R427	1-249-429-11	CARBON	10K	5%	1/4W	
R428	1-249-425-11	CARBON	4.7K	5%	1/4W	
R429	1-249-405-11	CARBON	100	5%	1/4W	
R430	1-247-711-11	CARBON	680	5%	1/4W	
R431	1-249-416-11	CARBON	820	5%	1/4W	
R432	1-249-414-11	CARBON	560	5%	1/4W	
R433	1-249-433-11	CARBON	22K	5%	1/4W	
R434	1-249-425-11	CARBON	4.7K	5%	1/4W	
R435	1-249-405-11	CARBON	100	5%	1/4W	
R436	1-249-423-11	CARBON	3.3K	5%	1/4W	
R437	1-249-411-11	CARBON	330	5%	1/4W	
R438	1-249-405-11	CARBON	100	5%	1/4W	
R439	1-249-417-11	CARBON	1K	5%	1/4W	
R440	1-249-425-11	CARBON	4.7K	5%	1/4W	
R441	1-249-421-11	CARBON	2.2K	5%	1/4W	
R442	1-247-700-11	CARBON	100	5%	1/4W	
R443	1-249-421-11	CARBON	2.2K	5%	1/4W	
R444	1-249-419-11	CARBON	1.5K	5%	1/4W	
R445	1-249-417-11	CARBON	1K	5%	1/4W	
R446	1-249-422-11	CARBON	2.7K	5%	1/4W	
R447	1-249-429-11	CARBON	10K	5%	1/4W	
R448	1-247-883-00	CARBON	150K	5%	1/4W	
R449	1-249-462-11	CARBON	22K	5%	1/4W	
R450	1-249-409-11	CARBON	220	5%	1/4W	
R451	1-247-704-11	CARBON	220	5%	1/4W	
R452	1-249-409-11	CARBON	220	5%	1/4W	
R453	1-247-704-11	CARBON	220	5%	1/4W	
R454	1-249-417-11	CARBON	1K	5%	1/4W	
R455	1-249-409-11	CARBON	220	5%	1/4W	
R456	1-249-409-11	CARBON	220	5%	1/4W	
R457	1-249-409-11	CARBON	220	5%	1/4W	
R458	1-249-433-11	CARBON	22K	5%	1/4W	
R459	1-249-425-11	CARBON	4.7K	5%	1/4W	
R460	1-249-425-11	CARBON	4.7K	5%	1/4W	
R461	1-249-433-11	CARBON	22K	5%	1/4W	
R462	1-249-386-11	CARBON	2.7	5%	1/4W	F
R464	1-259-881-11	CARBON	2.7M	5%	1/4W	
R465	1-249-465-11	CARBON	47K	5%	1/4W	
R466	1-249-421-11	CARBON	2.2K	5%	1/4W	
R467	1-249-431-11	CARBON	15K	5%	1/4W	
R468	1-249-431-11	CARBON	15K	5%	1/4W	
R469	1-247-897-11	CARBON	560K	5%	1/4W	
R470	1-249-437-11	CARBON	47K	5%	1/4W	
R471	1-249-429-11	CARBON	10K	5%	1/4W	
R472	1-249-417-11	CARBON	1K	5%	1/4W	

• ✱ : Selected to yield optimum performance.

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REF.NO.	PART NO.	DESCRIPTION				REMARK
R473	1-249-437-11	CARBON	47K	5%	1/4W	
R474	1-249-429-11	CARBON	10K	5%	1/4W	
R475	1-249-417-11	CARBON	1K	5%	1/4W	
R476	1-249-401-11	CARBON	47	5%	1/4W	
R477	1-249-417-11	CARBON	1K	5%	1/4W	
R478	1-249-401-11	CARBON	47	5%	1/4W	
R479	1-249-417-11	CARBON	1K	5%	1/4W	
R480	1-249-401-11	CARBON	47	5%	1/4W	
R481	1-249-433-11	CARBON	22K	5%	1/4W	
R482	1-249-433-11	CARBON	22K	5%	1/4W	
R483	1-249-433-11	CARBON	22K	5%	1/4W	
R484	1-247-891-00	CARBON	330K	5%	1/4W	
R485	1-247-891-00	CARBON	330K	5%	1/4W	
R486	1-249-433-11	CARBON	22K	5%	1/4W	
R487	1-249-433-11	CARBON	22K	5%	1/4W	
R488	1-249-418-11	CARBON	1.2K	5%	1/4W	F
R489	1-249-421-11	CARBON	2.2K	5%	1/4W	
R490	1-247-895-00	CARBON	470K	5%	1/4W	
R491	1-249-420-11	CARBON	1.8K	5%	1/4W	
R492	1-249-417-11	CARBON	1K	5%	1/4W	
R493	1-249-441-11	CARBON	100K	5%	1/4W	
R494	1-249-413-11	CARBON	470	5%	1/4W	
R495	1-249-433-11	CARBON	22K	5%	1/4W	
R496	1-249-433-11	CARBON	22K	5%	1/4W	
R497	1-249-437-11	CARBON	47K	5%	1/4W	
R498	1-249-433-11	CARBON	22K	5%	1/4W	
R499	1-249-433-11	CARBON	22K	5%	1/4W	
✱R500	1-215-451-00	METAL	18K	1%	1/6W	
✱R500	1-215-452-00	METAL	20K	1%	1/6W	
✱R500	1-215-453-00	METAL	22K	1%	1/6W	
✱R500	1-215-454-00	METAL	24K	1%	1/6W	
✱R500	1-215-455-00	METAL	27K	1%	1/6W	
✱R500	1-215-456-00	METAL	30K	1%	1/6W	
✱R500	1-215-457-00	METAL	33K	1%	1/6W	
✱R500	1-215-458-00	METAL	36K	1%	1/6W	
✱R500	1-215-459-00	METAL	39K	1%	1/6W	
✱R500	1-215-460-00	METAL	43K	1%	1/6W	
✱R500	1-215-461-00	METAL	47K	1%	1/6W	
✱R500	1-215-462-00	METAL	51K	1%	1/6W	
✱R500	1-215-463-00	METAL	56K	1%	1/6W	
✱R500	1-215-464-00	METAL	62K	1%	1/6W	
✱R500	1-215-465-00	METAL	68K	1%	1/6W	
✱R500	1-215-466-00	METAL	75K	1%	1/6W	
✱R500	1-215-467-00	METAL	82K	1%	1/6W	
R501	1-247-711-11	CARBON	680	5%	1/4W	F
R502	1-216-464-11	METAL OXIDE	18K	5%	2W	F
R503	1-249-440-11	CARBON	82K	5%	1/4W	
R504	1-249-424-11	CARBON	3.9K	5%	1/4W	
R505	1-249-440-11	CARBON	82K	5%	1/4W	
R506	1-249-431-11	CARBON	15K	5%	1/4W	
R507	1-249-434-11	CARBON	27K	5%	1/4W	
R508	1-247-723-11	CARBON	6.8K	5%	1/4W	F
R509	1-249-423-11	CARBON	3.3K	5%	1/4W	F
R510	1-215-919-11	METAL OXIDE	2.2K	5%	3W	F
R511	1-215-447-00	METAL	12K	1%	1/6W	
R512	1-212-883-00	FUSIBLE	120	5%	1/4W	F
R513	1-249-383-11	CARBON	1.5	5%	1/4W	F
R514	1-216-367-11	METAL OXIDE	0.68	5%	2W	F
R515	1-216-434-11	METAL OXIDE	1.8K	5%	1W	F
R516	1-214-888-00	METAL	10K	1%	1/2W	
R517	1-214-763-00	METAL	27K	1%	1/4W	
R518	1-214-956-00	METAL	470K	1%	1/4W	
R519	1-214-917-00	METAL	150K	1%	1/2W	
R520	1-215-467-00	METAL	82K	1%	1/6W	

REF.NO.	PART NO.	DESCRIPTION				REMARK
R521	1-215-445-00	METAL	10K	1%	1/6W	
R522	1-247-887-00	CARBON	220K	5%	1/4W	
R523	1-215-439-00	METAL	5.6K	1%	1/6W	
R524	1-249-469-11	CARBON	100K	5%	1/4W	
R525	1-215-445-00	METAL	10K	1%	1/6W	
R526	1-215-442-00	METAL	7.5K	1%	1/6W	
R527	1-249-417-11	CARBON	1K	5%	1/4W	
R528	1-215-877-11	METAL OXIDE	22K	5%	1W	F
R529	1-216-360-11	METAL OXIDE	8.2	5%	1W	F
R530	1-216-427-00	METAL OXIDE	120	5%	1W	F
R531	1-247-756-11	CARBON	2.2K	5%	1/2W	F
R532	1-249-436-11	CARBON	39K	5%	1/4W	
R533	1-249-422-11	CARBON	2.7K	5%	1/4W	
R534	1-247-719-11	CARBON	3.3K	5%	1/4W	
R535	1-215-441-00	METAL	6.8K	1%	1/6W	
R536	1-249-433-11	CARBON	22K	5%	1/4W	
R537	1-249-417-11	CARBON	1K	5%	1/4W	F
R538	1-249-428-11	CARBON	8.2K	5%	1/4W	
R539	1-247-883-00	CARBON	150K	5%	1/4W	
R540	1-249-466-11	CARBON	56K	5%	1/4W	
R541	1-247-883-00	CARBON	150K	5%	1/4W	
R542	1-249-438-11	CARBON	56K	5%	1/4W	
R543	1-247-903-00	CARBON	1M	5%	1/4W	
R544	1-215-453-00	METAL	22K	1%	1/6W	
R545	1-249-417-11	CARBON	1K	5%	1/4W	
R546	1-249-411-11	CARBON	330	5%	1/4W	
R547	1-249-414-11	CARBON	560	5%	1/4W	
R548	1-249-415-11	CARBON	680	5%	1/4W	
R549	1-215-473-00	METAL	150K	1%	1/6W	
R550	1-249-433-11	CARBON	22K	5%	1/4W	
R551	1-247-688-11	CARBON	10	5%	1/4W	F
R552	1-249-425-11	CARBON	4.7K	5%	1/4W	
R553	1-249-429-11	CARBON	10K	5%	1/4W	
R554	1-249-460-11	CARBON	15K	5%	1/4W	
R555	1-249-426-11	CARBON	5.6K	5%	1/4W	
R556	1-247-707-11	CARBON	390	5%	1/4W	
R557	1-215-463-00	METAL	56K	1%	1/6W	
R558	1-215-457-00	METAL	33K	1%	1/6W	
R559	1-215-453-00	METAL	22K	1%	1/6W	
R560	1-215-479-00	METAL	270K	1%	1/6W	
R561	1-249-435-11	CARBON	33K	5%	1/4W	
R562	1-249-422-11	CARBON	2.7K	5%	1/4W	
R563	1-249-428-11	CARBON	8.2K	5%	1/4W	
R564	1-215-445-00	METAL	10K	1%	1/6W	
R565	1-249-413-11	CARBON	470	5%	1/4W	F
R566	1-216-350-11	METAL OXIDE	1.2	5%	1W	F
R567	1-216-350-11	METAL OXIDE	1.2	5%	1W	F
R568	1-249-401-11	CARBON	47	5%	1/4W	F
R569	1-215-869-11	METAL OXIDE	1K	5%	1W	F
R570	1-247-697-11	CARBON	56	5%	1/4W	F
R571	1-215-867-00	METAL OXIDE	470	5%	1W	F
R572	1-216-355-11	METAL OXIDE	3.3	5%	1W	F
R573	1-247-746-11	CARBON	390	5%	1/2W	
R574	1-249-425-11	CARBON	4.7K	5%	1/4W	
R575	1-247-688-11	CARBON	10	5%	1/4W	F
R576	1-249-440-11	CARBON	82K	5%	1/4W	
R577	1-249-396-11	CARBON	18	5%	1/4W	
R578	1-249-433-11	CARBON	22K	5%	1/4W	
R579	1-249-433-11	CARBON	22K	5%	1/4W	
R580	1-249-433-11	CARBON	22K	5%	1/4W	
R581	1-249-429-11	CARBON	10K	5%	1/4W	
R582	1-249-429-11	CARBON	10K	5%	1/4W	
R583	1-249-438-11	CARBON	56K	5%	1/4W	

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REF.NO.	PART NO.	DESCRIPTION				REMARK
R584	1-247-881-00	CARBON	120K	5%	1/4W	
R585	1-249-433-11	CARBON	22K	5%	1/4W	
R586	1-215-449-00	METAL	15K	1%	1/6W	
R587	1-249-429-11	CARBON	10K	5%	1/4W	
R588	1-247-688-11	CARBON	10	5%	1/4W	F
R589	1-249-417-11	CARBON	1K	5%	1/4W	
R590	1-249-433-11	CARBON	22K	5%	1/4W	
R591	1-249-433-11	CARBON	22K	5%	1/4W	
R592	1-249-417-11	CARBON	1K	5%	1/4W	
R593	1-249-425-11	CARBON	4.7K	5%	1/4W	
R594	1-247-719-11	CARBON	3.3K	5%	1/4W	
R595	1-249-417-11	CARBON	1K	5%	1/4W	
R596	1-247-721-11	CARBON	4.7K	5%	1/4W	F
R597	1-215-437-00	METAL	4.7K	1%	1/6W	
R598	1-247-725-11	CARBON	10K	5%	1/4W	
R599	1-247-711-11	CARBON	680	5%	1/4W	F
R800	1-215-443-00	METAL	8.2K	1%	1/6W	
R801	1-249-440-11	CARBON	82K	5%	1/4W	
R802	1-215-429-00	METAL	2.2K	1%	1/6W	
R803	1-249-465-11	CARBON	47K	5%	1/4W	
R804	1-247-726-11	CARBON	33K	5%	1/4W	F
R805	1-249-407-11	CARBON	150	5%	1/4W	
R806	1-249-415-11	CARBON	680	5%	1/4W	
R807	1-249-437-11	CARBON	47K	5%	1/4W	
R808	1-249-433-11	CARBON	22K	5%	1/4W	
R809	1-215-471-00	METAL	120K	1%	1/6W	
R810	1-215-467-00	METAL	82K	1%	1/6W	
R811	1-249-429-11	CARBON	10K	5%	1/4W	
R812	1-249-427-11	CARBON	6.8K	5%	1/4W	
R813	1-249-405-11	CARBON	100	5%	1/4W	
R814	1-249-417-11	CARBON	1K	5%	1/4W	
R815	1-249-409-11	CARBON	220	5%	1/4W	
R816	1-249-429-11	CARBON	10K	5%	1/4W	
R817	1-247-881-00	CARBON	120K	5%	1/4W	
R818	1-247-881-00	CARBON	120K	5%	1/4W	
R819	1-247-903-00	CARBON	1M	5%	1/4W	
R820	1-249-426-11	CARBON	5.6K	5%	1/4W	
R821	1-247-881-00	CARBON	120K	5%	1/4W	
R822	1-249-417-11	CARBON	1K	5%	1/4W	
R823	1-247-696-11	CARBON	47	5%	1/4W	F
R824	1-249-439-11	CARBON	68K	5%	1/4W	
R825	1-249-437-11	CARBON	47K	5%	1/4W	
R826	1-249-417-11	CARBON	1K	5%	1/4W	
R827	1-249-417-11	CARBON	1K	5%	1/4W	
R828	1-249-417-11	CARBON	1K	5%	1/4W	
R829	1-249-421-11	CARBON	2.2K	5%	1/4W	
R830	1-249-435-11	CARBON	33K	5%	1/4W	
R831	1-249-438-11	CARBON	56K	5%	1/4W	
R832	1-249-417-11	CARBON	1K	5%	1/4W	
R833	1-249-425-11	CARBON	4.7K	5%	1/4W	
R834	1-249-425-11	CARBON	4.7K	5%	1/4W	
R835	1-247-889-00	CARBON	270K	5%	1/4W	
R836	1-247-897-11	CARBON	560K	5%	1/4W	
R837	1-215-469-00	METAL	100K	1%	1/6W	
R838	1-246-531-00	CARBON	270K	5%	1/4W	
R840	1-247-696-11	CARBON	47	5%	1/4W	
R842	1-249-409-11	CARBON	220	5%	1/4W	
R843	1-247-704-11	CARBON	220	5%	1/4W	
R844	1-249-417-11	CARBON	1K	5%	1/4W	
R845	1-247-725-11	CARBON	10K	5%	1/4W	
R846	1-215-439-00	METAL	5.6K	1%	1/6W	
R847	1-249-433-11	CARBON	22K	5%	1/4W	
R848	1-249-433-11	CARBON	22K	5%	1/4W	
R850	1-249-440-11	CARBON	82K	5%	1/4W	
R851	1-249-439-11	CARBON	68K	5%	1/4W	
R852	1-249-437-11	CARBON	47K	5%	1/4W	
R853	1-247-710-11	CARBON	560	5%	1/4W	
R855	1-249-414-11	CARBON	560	5%	1/4W	
R856	1-249-429-11	CARBON	10K	5%	1/4W	
R857	1-247-725-11	CARBON	10K	5%	1/4W	
R858	1-249-433-11	CARBON	22K	5%	1/4W	
R860	1-249-425-11	CARBON	4.7K	5%	1/4W	
R861	1-249-437-11	CARBON	47K	5%	1/4W	
R862	1-249-425-11	CARBON	4.7K	5%	1/4W	
R863	1-247-721-11	CARBON	4.7K	5%	1/4W	
R864	1-247-717-11	CARBON	2.2K	5%	1/4W	
R866	1-249-426-11	CARBON	5.6K	5%	1/4W	
R867	1-249-426-11	CARBON	5.6K	5%	1/4W	
R868	1-249-421-11	CARBON	2.2K	5%	1/4W	
R869	1-249-425-11	CARBON	4.7K	5%	1/4W	
R870	1-249-426-11	CARBON	5.6K	5%	1/4W	
R871	1-249-427-11	CARBON	6.8K	5%	1/4W	
R872	1-249-417-11	CARBON	1K	5%	1/4W	
R873	1-249-437-11	CARBON	47K	5%	1/4W	
R874	1-215-437-00	METAL	4.7K	1%	1/6W	
R875	1-215-453-00	METAL	22K	1%	1/6W	
R876	1-249-429-11	CARBON	10K	5%	1/4W	
R877	1-249-417-11	CARBON	1K	5%	1/4W	
R878	1-249-429-11	CARBON	10K	5%	1/4W	
R879	1-249-437-11	CARBON	47K	5%	1/4W	
R880	1-249-417-11	CARBON	1K	5%	1/4W	
R881	1-249-423-11	CARBON	3.3K	5%	1/4W	
R883	1-249-409-11	CARBON	220	5%	1/4W	
R884	1-249-417-11	CARBON	1K	5%	1/4W	
R885	1-249-469-11	CARBON	100K	5%	1/4W	
R886	1-247-725-11	CARBON	10K	5%	1/4W	
R887	1-247-704-11	CARBON	220	5%	1/4W	
R1001	1-247-717-11	CARBON	2.2K	5%	1/4W	
R1002	1-249-429-11	CARBON	10K	5%	1/4W	
R1003	1-249-405-11	CARBON	100	5%	1/4W	
R1004	1-247-725-11	CARBON	10K	5%	1/4W	
R1005	1-249-437-11	CARBON	47K	5%	1/4W	
R1006	1-249-439-11	CARBON	68K	5%	1/4W	
R1007	1-249-433-11	CARBON	22K	5%	1/4W	
R1009	1-249-429-11	CARBON	10K	5%	1/4W	
R1010	1-249-415-11	CARBON	680	5%	1/4W	
R1011	1-249-455-11	CARBON	4.7	5%	1/4W	
R1012	1-216-355-11	METAL OXIDE	3.3	5%	1W	F
R1013	1-249-413-11	CARBON	470	5%	1/4W	
R1014	1-249-414-11	CARBON	560	5%	1/4W	
R1015	1-215-867-00	METAL OXIDE	470	5%	1W	F
R1016	1-247-698-11	CARBON	68	5%	1/4W	
R1017	1-249-421-11	CARBON	2.2K	5%	1/4W	
R1018	1-249-437-11	CARBON	47K	5%	1/4W	
R1019	1-212-857-00	FUSIBLE	10	5%	1/4W	F
R1020	1-249-429-11	CARBON	10K	5%	1/4W	
R1021	1-249-434-11	CARBON	27K	5%	1/4W	
R1022	1-249-428-11	CARBON	8.2K	5%	1/4W	
R1023	1-249-428-11	CARBON	8.2K	5%	1/4W	
R1024	1-247-903-00	CARBON	1M	5%	1/4W	
R1025	1-249-429-11	CARBON	10K	5%	1/4W	
R1026	1-249-429-11	CARBON	10K	5%	1/4W	
R1027	1-215-454-00	METAL	24K	1%	1/6W	
R1301	1-249-429-11	CARBON	10K	5%	1/4W	
R1302	1-247-725-11	CARBON	10K	5%	1/4W	
R1303	1-249-429-11	CARBON	10K	5%	1/4W	
R1304	1-249-405-11	CARBON	100	5%	1/4W	

A C

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

REF.NO.	PART NO.	DESCRIPTION				REMARK
R1306	1-247-700-11	CARBON	100	5%	1/4W	
R1307	1-249-421-11	CARBON	2.2K	5%	1/4W	
		<VARIABLE RESISTOR>				
RV002	1-228-993-00	RES, ADJ, CARBON 4.7K				
RV003	1-228-993-00	RES, ADJ, CARBON 4.7K				
RV004	1-228-993-00	RES, ADJ, CARBON 4.7K				
RV005	1-228-996-00	RES, ADJ, CARBON 47K				
RV006	1-228-994-00	RES, ADJ, CARBON 10K				
RV007	1-228-994-00	RES, ADJ, CARBON 10K				
RV401	1-228-994-00	RES, ADJ, CARBON 10K				
RV501	1-228-993-00	RES, ADJ, METAL GLAZE 4.7K				
RV502	1-223-102-00	RES, ADJ, WIREWOUND 120				
RV503	1-228-996-00	RES, ADJ, METAL GLAZE 47K				
RV504	1-228-990-00	RES, ADJ, CARBON 1K				
RV505	1-228-995-00	RES, ADJ, CARBON 22K				
RV506	1-228-989-00	RES, ADJ, CARBON 470				
RV507	1-224-250-XX	RES, ADJ, METAL GLAZE 2.2K				
RV508	1-228-994-00	RES, ADJ, CARBON 10K				
RV509	1-228-998-00	RES, ADJ, CARBON 220K				
RV510	1-228-996-00	RES, ADJ, CARBON 47K				
RV511	1-228-989-00	RES, ADJ, CARBON 470				
RV512	1-228-995-00	RES, ADJ, CARBON 22K				
RV513	1-228-993-00	RES, ADJ, METAL GLAZE 4.7K				
RV514	1-228-996-00	RES, ADJ, CARBON 47K				
RV550	1-228-993-00	RES, ADJ, CARBON 4.7K				
		<TRANSFORMER>				
T501 ⚠	1-439-395-12	TRANSFORMER ASSY, FLYBACK				
T502	1-437-131-00	TRANSFORMER, DRIVE				
		<THERMISTOR>				
TH501	1-806-110-00	THERMISTOR				
		**********				
	*A-1330-986-A	C BOARD, COMPLETE				
		**********				
⚠	1-526-819-11	SOCKET, PICTURE TUBE				
	*4-374-912-01	COVER (MAIN), CV VOL				
	*4-374-913-01	COVER (REAR LID), CV VOL				
		<CONNECTOR>				
C1	*1-508-768-00	PIN, CONNECTOR (5MM PITCH) 6P				
C2	*1-506-371-00	PIN, CONNECTOR 2P				
C3	*1-564-513-11	PLUG, CONNECTOR 10P				
		<CAPACITOR>				
C701	1-102-115-00	CERAMIC	560PF	10%	50V	
C702	1-102-115-00	CERAMIC	560PF	10%	50V	
C703	1-102-115-00	CERAMIC	560PF	10%	50V	
C704	1-102-121-00	CERAMIC	0.0022MF	10%	50V	
C705	1-123-875-11	ELECT	10MF	20%	50V	
C706	1-102-074-00	CERAMIC	0.001MF	10%	50V	
C707	1-162-116-00	CERAMIC	680PF	10%	2KV	
C708	1-130-338-11	FILM	0.01MF	10%	630V	
C713	1-108-704-11	MYLAR	0.1MF	10%	200V	
C714	1-102-116-00	CERAMIC	680PF	10%	50V	
C715	1-102-116-00	CERAMIC	680PF	10%	50V	
C716	1-102-116-00	CERAMIC	680PF	10%	50V	
C717	1-162-116-00	CERAMIC	680PF	10%	2KV	
C718	1-162-115-00	CERAMIC	330PF	10%	2KV	
C720	1-162-116-00	CERAMIC	680PF	10%	2KV	
C721	1-162-116-00	CERAMIC	680PF	10%	2KV	
C722	1-162-116-00	CERAMIC	680PF	10%	2KV	
		<DIODE>				
D701	8-719-911-19	DIODE 1SS119				
D702	8-719-911-19	DIODE 1SS119				
D703	8-719-911-19	DIODE 1SS119				
D704	8-719-911-19	DIODE 1SS119				
D705	8-719-911-19	DIODE 1SS119				
D706	8-719-911-19	DIODE 1SS119				
D707	8-719-901-83	DIODE 1SS83				
D708	8-719-901-83	DIODE 1SS83				
D709	8-719-901-83	DIODE 1SS83				
D713	8-719-901-83	DIODE 1SS83				
D715	8-719-901-83	DIODE 1SS83				
D716	8-719-901-83	DIODE 1SS83				
D717	8-719-901-83	DIODE 1SS83				
		<FILTER>				
FL701	1-236-058-11	ENCAPSULATED COMPONENT				
FL702	1-236-058-11	ENCAPSULATED COMPONENT				
FL703	1-236-058-11	ENCAPSULATED COMPONENT				
		<TRANSISTOR>				
Q701	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q702	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q703	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q704	8-729-200-17	TRANSISTOR 2SA1091				
Q705	8-729-200-17	TRANSISTOR 2SA1091				
Q706	8-729-200-17	TRANSISTOR 2SA1091				
Q707	8-729-326-11	TRANSISTOR 2SC2611				
Q708	8-729-326-11	TRANSISTOR 2SC2611				
Q709	8-729-326-11	TRANSISTOR 2SC2611				
Q710	8-729-200-17	TRANSISTOR 2SA1091				
Q711	8-729-200-17	TRANSISTOR 2SA1091				
Q712	8-729-200-17	TRANSISTOR 2SA1091				
Q713	8-729-255-12	TRANSISTOR 2SC2551				
Q714	8-729-255-12	TRANSISTOR 2SC2551				
Q715	8-729-255-12	TRANSISTOR 2SC2551				
Q716	8-729-255-12	TRANSISTOR 2SC2551				
Q717	8-729-255-12	TRANSISTOR 2SC2551				
		<RESISTOR>				
R702	1-215-480-00	METAL	300K	1%	1/6W	
R704	1-215-408-00	METAL	300	1%	1/6W	
R705	1-249-410-11	CARBON	270	5%	1/4W	
R706	1-249-410-11	CARBON	270	5%	1/4W	
R707	1-249-420-11	CARBON	1.8K	5%	1/4W	
R708	1-249-419-11	CARBON	1.5K	5%	1/4W	
R709	1-249-420-11	CARBON	1.8K	5%	1/4W	
R710	1-249-397-11	CARBON	22	5%	1/4W	
R711	1-249-397-11	CARBON	22	5%	1/4W	
R712	1-249-397-11	CARBON	22	5%	1/4W	
R715	1-202-818-00	SOLID	1K	10%	1/2W	
R716	1-216-486-00	METAL OXIDE	8.2K	5%	3W	F
R717	1-202-818-00	SOLID	1K	10%	1/2W	
R718	1-216-486-00	METAL OXIDE	8.2K	5%	3W	F

C V

REF.NO.	PART NO.	DESCRIPTION				REMARK
R719	1-202-818-00	SOLID	1K	10%	1/2W	
R720	1-216-486-00	METAL OXIDE	8.2K	5%	3W	F
R721	1-216-372-11	METAL OXIDE	1.8	5%	2W	F
R722	1-202-848-00	SOLID	680K	10%	1/2W	
R723	1-202-838-00	SOLID	100K	10%	1/2W	
R724	1-202-842-11	SOLID	220K	10%	1/2W	
R725	1-202-719-00	SOLID	1M	10%	1/2W	
R731	1-249-409-11	CARBON	220	5%	1/4W	
R732	1-249-409-11	CARBON	220	5%	1/4W	
R733	1-249-409-11	CARBON	220	5%	1/4W	
R734	1-249-409-11	CARBON	220	5%	1/4W	F
R735	1-249-409-11	CARBON	220	5%	1/4W	F
R736	1-249-409-11	CARBON	220	5%	1/4W	F
R737	1-249-405-11	CARBON	100	5%	1/4W	
R738	1-249-405-11	CARBON	100	5%	1/4W	
R739	1-249-405-11	CARBON	100	5%	1/4W	
R740	1-249-429-11	CARBON	10K	5%	1/4W	F
R741	1-249-429-11	CARBON	10K	5%	1/4W	F
R742	1-249-429-11	CARBON	10K	5%	1/4W	F
R743	1-249-441-11	CARBON	100K	5%	1/4W	
R744	1-249-429-11	CARBON	10K	5%	1/4W	
R745	1-249-429-11	CARBON	10K	5%	1/4W	
R746	1-215-902-11	METAL OXIDE	47K	5%	1W	F
R747	1-247-725-11	CARBON	10K	5%	1/4W	F
R748	1-247-713-11	CARBON	1K	5%	1/4W	F
R749	1-215-902-11	METAL OXIDE	47K	5%	2W	F
R750	1-249-400-11	CARBON	39	5%	1/4W	F
R751	1-247-887-00	CARBON	220K	5%	1/4W	
R752	1-247-887-00	CARBON	220K	5%	1/4W	
R753	1-247-887-00	CARBON	220K	5%	1/4W	

<VARIABLE RESISTOR>

RV707	1-230-641-11	RES, ADJ, METAL GLAZE 2.2M
RV708	1-230-798-11	RES, ADJ, METAL GLAZE 90M
RV709	1-230-641-11	RES, ADJ, METAL GLAZE 2.2M

****

*1-629-148-11 V BOARD

****

<CAPACITOR>

C1700	1-124-120-11	ELECT	220MF	20%	25V
C1701	1-101-004-00	CERAMIC	0.01MF		50V
C1702	1-102-978-00	CERAMIC	220PF	5%	50V
C1703	1-102-978-00	CERAMIC	220PF	5%	50V
C1705	1-124-499-11	ELECT	1MF	20%	50V
C1706	1-124-499-11	ELECT	1MF	20%	50V
C1707	1-124-120-11	ELECT	220MF	20%	25V
C1710	1-101-884-00	CERAMIC	56PF	5%	50V
C1711	1-101-884-00	CERAMIC	56PF	5%	50V

<DIODE>

D1700	8-719-911-19	DIODE 1SS119
D1701	8-719-936-56	DIODE DAN209S
D1702	8-719-936-56	DIODE DAN209S
D1703	8-719-936-56	DIODE DAN209S
D1704	8-719-936-56	DIODE DAN209S
D1705	8-719-933-28	DIODE DAP209S
D1706	8-719-933-28	DIODE DAP209S
D1707	8-719-911-19	DIODE 1SS119
D1708	8-719-911-19	DIODE 1SS119

REF.NO.	PART NO.	DESCRIPTION	REMARK

<TRANSISTOR>

Q1700	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q1701	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q1702	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q1703	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q1704	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q1705	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q1706	8-729-900-89	TRANSISTOR DTC144ES
Q1707	8-729-900-89	TRANSISTOR DTC144ES
Q1708	8-729-115-30	TRANSISTOR 2SK105A-40
Q1709	8-729-115-30	TRANSISTOR 2SK105A-40
Q1710	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q1711	8-729-119-78	TRANSISTOR 2SC2785-HFE

<RESISTOR>

R1700	1-249-426-11	CARBON	5.6K	5%	1/4W
R1701	1-249-413-11	CARBON	470	5%	1/4W
R1702	1-249-413-11	CARBON	470	5%	1/4W
R1703	1-249-413-11	CARBON	470	5%	1/4W
R1704	1-249-413-11	CARBON	470	5%	1/4W
R1705	1-247-885-00	CARBON	180K	5%	1/4W
R1706	1-249-437-11	CARBON	47K	5%	1/4W
R1707	1-247-883-00	CARBON	150K	5%	1/4W
R1708	1-249-437-11	CARBON	47K	5%	1/4W
R1709	1-249-429-11	CARBON	10K	5%	1/4W
R1710	1-249-438-11	CARBON	56K	5%	1/4W
R1711	1-249-429-11	CARBON	10K	5%	1/4W
R1712	1-249-429-11	CARBON	10K	5%	1/4W
R1713	1-249-429-11	CARBON	10K	5%	1/4W
R1714	1-249-429-11	CARBON	10K	5%	1/4W
R1715	1-249-429-11	CARBON	10K	5%	1/4W
R1716	1-249-438-11	CARBON	56K	5%	1/4W
R1717	1-249-429-11	CARBON	10K	5%	1/4W
R1718	1-249-429-11	CARBON	10K	5%	1/4W
R1719	1-249-417-11	CARBON	1K	5%	1/4W
R1720	1-249-429-11	CARBON	10K	5%	1/4W
R1721	1-249-429-11	CARBON	10K	5%	1/4W
R1722	1-249-429-11	CARBON	10K	5%	1/4W
R1723	1-249-429-11	CARBON	10K	5%	1/4W
R1724	1-249-429-11	CARBON	10K	5%	1/4W
R1725	1-247-891-00	CARBON	330K	5%	1/4W
R1726	1-247-891-00	CARBON	330K	5%	1/4W
R1727	1-249-437-11	CARBON	47K	5%	1/4W
R1728	1-249-437-11	CARBON	47K	5%	1/4W
R1729	1-249-405-11	CARBON	100	5%	1/4W
R1730	1-249-405-11	CARBON	100	5%	1/4W
R1731	1-249-417-11	CARBON	1K	5%	1/4W
R1732	1-249-417-11	CARBON	1K	5%	1/4W
R1733	1-249-409-11	CARBON	220	5%	1/4W
R1734	1-249-409-11	CARBON	220	5%	1/4W
R1750	1-249-423-11	CARBON	3.3K	5%	1/4W

<VARIABLE RESISTOR>

RV1700	1-228-995-00	RES, ADJ, CARBON 22K
RV1701	1-228-995-00	RES, ADJ, CARBON 22K
RV1702	1-228-995-00	RES, ADJ, CARBON 22K
RV1703	1-228-995-00	RES, ADJ, CARBON 22K
RV1704	1-237-524-21	RES, ADJ, CARBON 1M
RV1705	1-228-999-00	RES, ADJ, CARBON 470K
RV1706	1-228-999-00	RES, ADJ, CARBON 470K

REF.NO.	PART NO.	DESCRIPTION				REMARK
RV1707	1-237-524-21	RES, ADJ, CARBON 1M				
RV1708	1-228-995-00	RES, ADJ, CARBON 22K				
RV1709	1-228-995-00	RES, ADJ, CARBON 22K				
RV1710	1-228-995-00	RES, ADJ, CARBON 22K				
		<CONNECTOR>				
V1	*1-563-720-11	SOCKET, CONNECTOR (PC BOARD)9P				
V2	*1-563-720-11	SOCKET, CONNECTOR (PC BOARD)9P				
**********						
	*1-629-149-11	W BOARD				
		*******				
		<CAPACITOR>				
C1400	1-136-169-00	FILM	0.22MF	5%	50V	
C1401	1-136-153-00	FILM	0.01MF	5%	50V	
C1402	1-124-478-11	ELECT	100MF	20%	25V	
C1403	1-102-074-00	CERAMIC	0.001MF	10%	50V	
C1404	1-124-478-11	ELECT	100MF	20%	25V	
C1405	1-123-875-11	ELECT	10MF	20%	50V	
C1406	1-124-902-00	ELECT	0.47MF	20%	50V	
		<DIODE>				
D1400	8-719-911-19	DIODE 1SS119				
D1401	8-719-911-19	DIODE 1SS119				
		<IC>				
IC1400	8-759-135-80	IC UPC358C				
		<TRANSISTOR>				
Q1400	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q1401	8-729-119-76	TRANSISTOR 2SA1175-HFE				
Q1402	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q1403	8-729-119-78	TRANSISTOR 2SC2785-HFE				
		<RESISTOR>				
R1400	1-249-437-11	CARBON	47K	5%	1/4W	
R1401	1-249-415-11	CARBON	680	5%	1/4W	
R1402	1-247-895-00	CARBON	470K	5%	1/4W	
R1403	1-247-903-00	CARBON	1M	5%	1/4W	
R1404	1-249-438-11	CARBON	56K	5%	1/4W	
R1405	1-249-433-11	CARBON	22K	5%	1/4W	
R1406	1-249-411-11	CARBON	330	5%	1/4W	
R1407	1-249-433-11	CARBON	22K	5%	1/4W	
R1408	1-249-411-11	CARBON	330	5%	1/4W	
R1409	1-249-429-11	CARBON	10K	5%	1/4W	
R1410	1-249-409-11	CARBON	220	5%	1/4W	
R1411	1-249-426-11	CARBON	5.6K	5%	1/4W	
R1412	1-249-411-11	CARBON	330	5%	1/4W	
R1413	1-247-883-00	CARBON	150K	5%	1/4W	
R1414	1-249-429-11	CARBON	10K	5%	1/4W	
R1416	1-249-429-11	CARBON	10K	5%	1/4W	
R1417	1-249-433-11	CARBON	22K	5%	1/4W	
R1418	1-249-439-11	CARBON	68K	5%	1/4W	
R1419	1-249-440-11	CARBON	82K	5%	1/4W	
R1420	1-249-441-11	CARBON	100K	5%	1/4W	
		<CONNECTOR>				
W1	*1-565-482-11	CONNECTOR, BOARD TO BOARD 6P				
W2	*1-564-506-11	PLUG, CONNECTOR 3P				
**********						
	*1-629-150-11	Y BOARD				
		*******				
		<CAPACITOR>				
C1500	1-124-499-11	ELECT	1MF	20%	50V	
C1501	1-102-125-00	CERAMIC	0.0047MF	10%	50V	
		<IC>				
IC1500	8-759-909-70	IC CX23025				
		<TRANSISTOR>				
Q1500	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q1501	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q1502	8-729-900-63	TRANSISTOR DTA124ES				
		<RESISTOR>				
R1500	1-249-437-11	CARBON	47K	5%	1/4W	
R1501	1-249-437-11	CARBON	47K	5%	1/4W	
R1502	1-249-437-11	CARBON	47K	5%	1/4W	F
R1503	1-249-429-11	CARBON	10K	5%	1/4W	
R1504	1-249-437-11	CARBON	47K	5%	1/4W	
R1505	1-249-437-11	CARBON	47K	5%	1/4W	
		<CONNECTOR>				
Y1	*1-565-481-11	CONNECTOR, BOARD TO BOARD 5P				
**********						
	*1-629-153-11	J BOARD				
		*******				
		<CONNECTOR>				
J1	*1-568-106-11	PIN, CONNECTOR 7P				
**********						
	*1-629-151-11	XA BOARD				
		********				
		<CAPACITOR>				
C1300	1-101-005-00	CERAMIC	0.022MF		50V	
C1301	1-101-888-00	CERAMIC	68PF	5%	50V	
C1302	1-101-884-00	CERAMIC	56PF	5%	50V	
C1303	1-102-942-00	CERAMIC	5PF	1PF	50V	
C1304	1-102-947-00	CERAMIC	10PF	0.5PF	50V	
C1305	1-102-947-00	CERAMIC	10PF	0.5PF	50V	
C1306	1-102-951-00	CERAMIC	15PF	5%	50V	
C1307	1-102-951-00	CERAMIC	15PF	5%	50V	
C1308	1-124-478-11	ELECT	100MF	20%	25V	
C1309	1-102-125-00	CERAMIC	0.0047MF	10%	50V	

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

XA **U**

REF.NO.	PART NO.	DESCRIPTION				REMARK
		<TRIMMER>				
CV3	1-141-337-11	CAP, VAR, TRIMMER				
CV4	1-141-337-11	CAP, VAR, TRIMMER				
		<COIL>				
L1300	1-408-429-00	INDUCTOR	470UH			
L1301	1-408-429-00	INDUCTOR	470UH			
L1302	1-408-429-00	INDUCTOR	470UH			
L1303	1-408-429-00	INDUCTOR	470UH			
		<TRANSISTOR>				
Q1300	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q1301	8-729-900-89	TRANSISTOR DTC144ES				
Q1302	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q1303	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q1304	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q1305	8-729-119-78	TRANSISTOR 2SC2785-HFE				
		<RESISTOR>				
R1301	1-249-413-11	CARBON	470	5%	1/4W	
R1302	1-249-415-11	CARBON	680	5%	1/4W	
R1303	1-249-415-11	CARBON	680	5%	1/4W	
R1304	1-249-427-11	CARBON	6.8K	5%	1/4W	
R1305	1-249-413-11	CARBON	470	5%	1/4W	
R1306	1-249-413-11	CARBON	470	5%	1/4W	
R1308	1-249-417-11	CARBON	1K	5%	1/4W	
R1310	1-249-441-11	CARBON	100K	5%	1/4W	
R1311	1-249-441-11	CARBON	100K	5%	1/4W	
R1312	1-249-441-11	CARBON	100K	5%	1/4W	
R1313	1-249-441-11	CARBON	100K	5%	1/4W	
R1320	1-249-429-11	CARBON	10K	5%	1/4W	
R1321	1-249-429-11	CARBON	10K	5%	1/4W	
R1322	1-249-429-11	CARBON	10K	5%	1/4W	
R1323	1-249-429-11	CARBON	10K	5%	1/4W	
		<CRYSTAL>				
X358	1-567-505-11	OSCILLATOR, CRYSTAL				
X443	1-567-504-11	OSCILLATOR, CRYSTAL				
		<CONNECTOR>				
XA1	*1-565-483-11	CONNECTOR, BOARD TO BOARD 7P				
**********						
	*1-629-219-11	U BOARD (PVM-1440QM ONLY)				
		*******				
		<CAPACITOR>				
C1600	1-124-477-11	ELECT	47MF	20%	25V	
C1601	1-124-478-11	ELECT	100MF	20%	25V	
C1602	1-124-902-00	ELECT	0.47MF	20%	50V	
C1603	1-124-499-11	ELECT	1MF	20%	50V	
		<IC>				
IC1600	8-759-913-11	IC CX20125				
		<TRANSISTOR>				
Q1600	8-729-119-76	TRANSISTOR 2SA1175-HFE				
Q1601	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q1602	8-729-119-78	TRANSISTOR 2SC2785-HFE				
		<RESISTOR>				
R1600	1-247-897-11	CARBON	560K	5%	1/4W	
R1601	1-249-415-11	CARBON	680	5%	1/4W	
R1602	1-249-413-11	CARBON	470	5%	1/4W	
R1603	1-249-403-11	CARBON	68	5%	1/4W	
R1604	1-249-428-11	CARBON	8.2K	5%	1/4W	
R1605	1-249-415-11	CARBON	680	5%	1/4W	
R1606	1-219-413-11	CARBON	470	5%	1/4W	
R1607	1-249-428-11	CARBON	8.2K	5%	1/4W	
R1608	1-247-895-00	CARBON	470K	5%	1/4W	
R1609	1-247-897-11	CARBON	560K	5%	1/4W	
R1610	1-249-437-11	CARBON	47K	5%	1/4W	
		<CONNECTOR>				
U1	*1-565-483-11	CONNECTOR, BOARD TO BOARD 7P				
**********						
		MISCELLANEOUS				
		**********				
	1-544-063-11	SPEAKER				
⚠	1-237-614-12	RESISTOR ASSY, HIGH-VOLTAGE				
⚠	1-426-145-13	COIL, DEGAUSSING				
S901 ⚠	1-554-967-12	SWITCH, PUSH (AC POWER)(1 KEY)				
⚠	1-451-329-11	DEFLECTION YOKE (Y14FZA)				
	1-452-032-00	MAGNET, DISK; 10MM φ				
	1-452-094-00	MAGNET, ROTATABLE DISK; 15MM φ				
	1-452-277-00	MAGNET, BMC				
	1-466-076-11	CONTROL UNIT (PVM-1442QM ONLY)				
	1-466-075-11	CONTROL UNIT (PVM-1444QM ONLY)				
	1-466-113-11	CONTROL UNIT (PVM-1440QM ONLY)				
	1-543-604-11	CORE, RING				
⚠	1-574-389-12	CORD, POWER (WITH CONNECTOR)				
V901 ⚠	8-734-621-05	PICTURE TUBE (M34KBE21X) (PVM-1442QM/1444QM ONLY)				
V901 ⚠	8-736-254-05	PICTURE TUBE (A34JHS10X) (PVM-1440QM ONLY)				

****

ACCESSORIES AND PACKING MATERIALS
****

PART NO.	DESCRIPTION	REMARK
3-786-761-11	MANUAL, INSTRUCTION	
*4-312-246-00	BAG, PROTECTION	
*4-391-866-01	CUSHION (UPPER) (ASSY)	
*4-391-867-01	CUSHION (LOWER) (ASSY)	
*4-391-897-01	INDIVIDUAL CARTON (PVM-1444QM ONLY)	
*4-391-899-01	INDIVIDUAL CARTON (PVM-1440QM ONLY)	
*4-393-301-01	INDIVIDUAL CARTON (PVM-1442QM ONLY)	

9-964-215-01

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Display Products Group

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PVM-1440QM/1442QM/1444QM

SONY

SERVICE MANUAL

AEP Model

PVM-1440QM
Serial No. 2,002,901 and later
Chassis No. SCC-C57A-A
PVM-1442QM
Serial No. 2,003,251 and later
Chassis No. SCC-C56A-A
PVM-1444QM
Serial No. 2,001,601 and later
Chassis No. SCC-C55A-A

SUPPLEMENT-1

File this Supplement with the Service Manual.

INTRODUCTION

A and W boards modification

☛ : Indicate modification portion

MICROFILM

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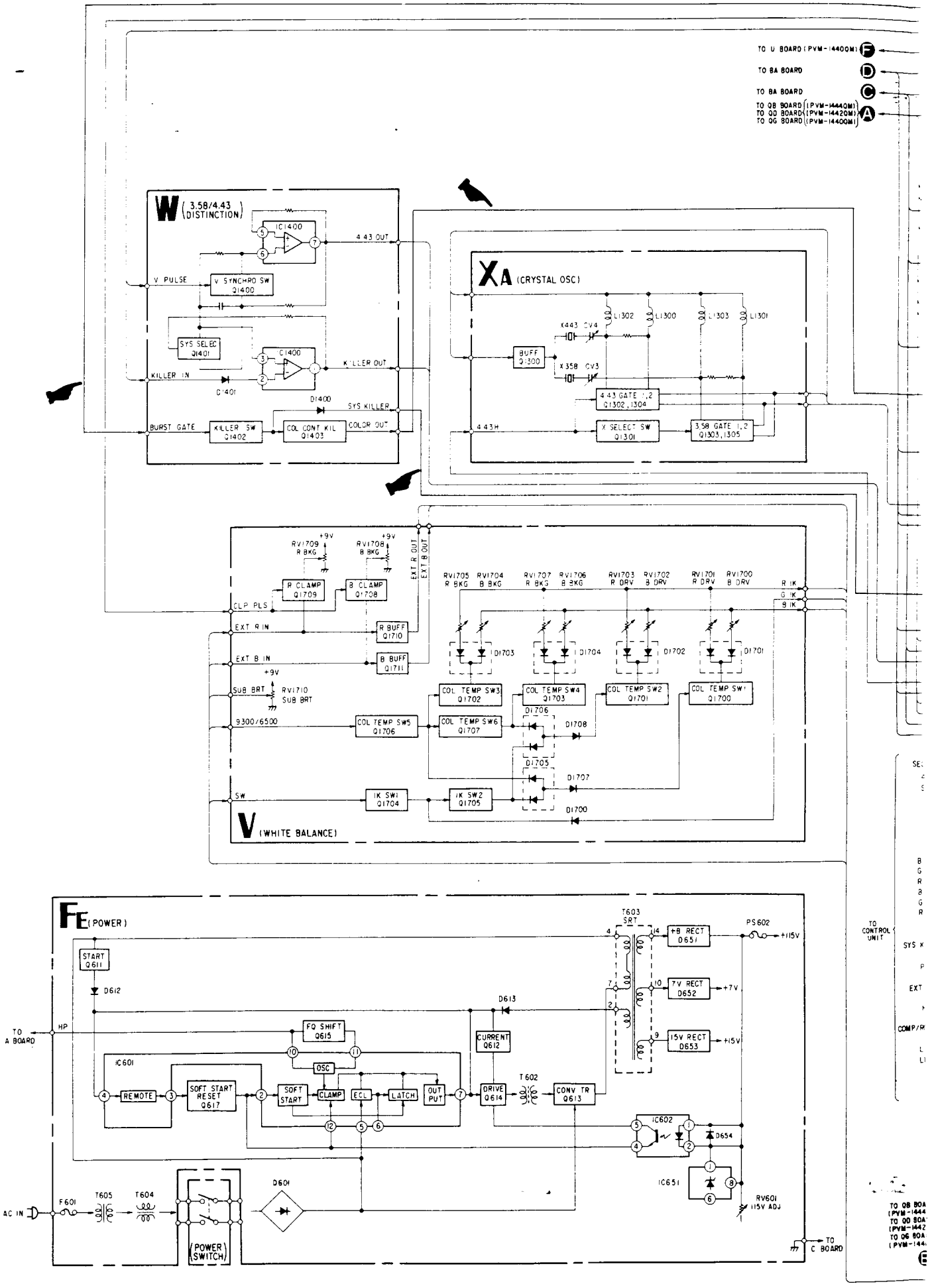

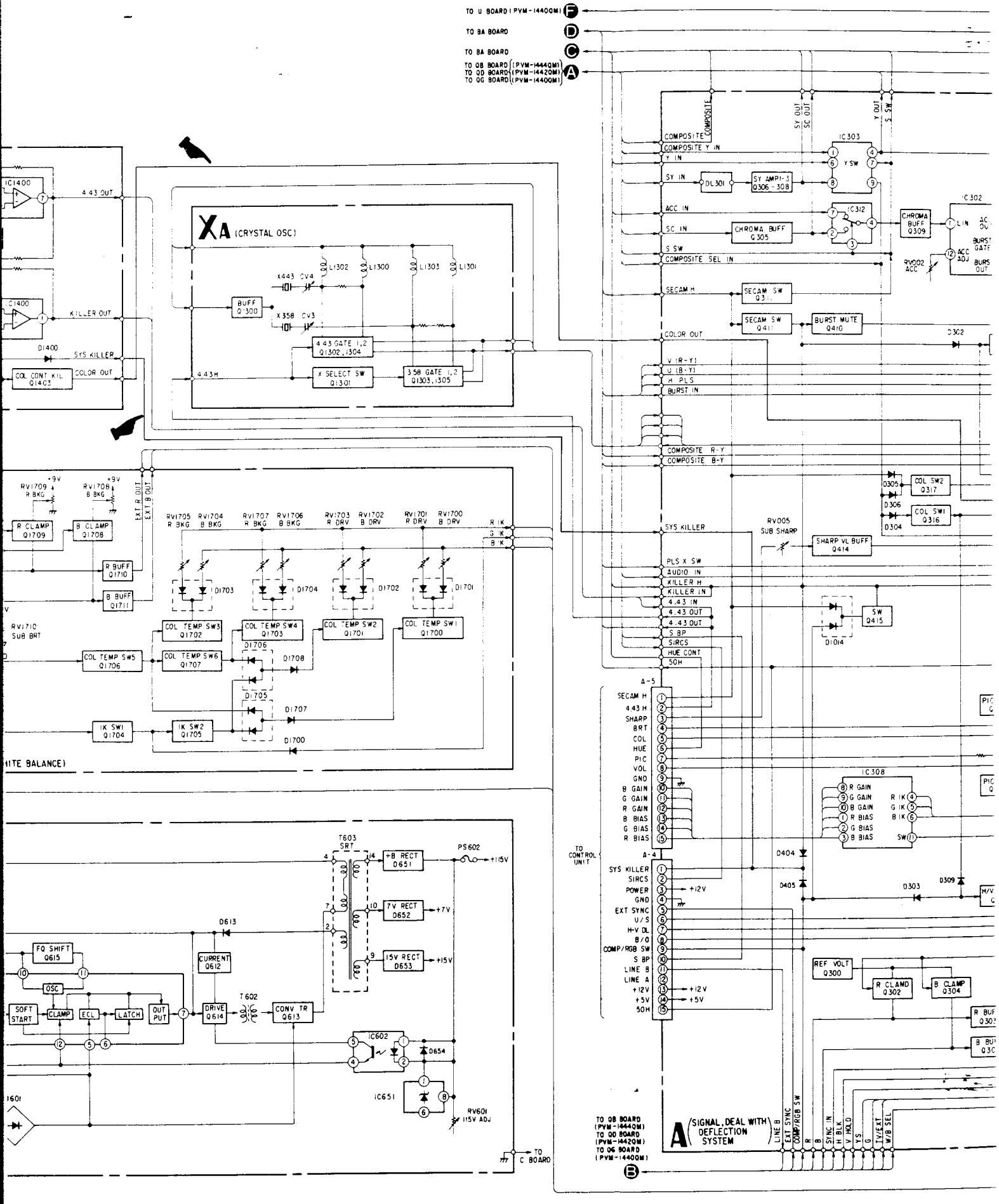
TO U BOARD (PVM-1440QM) F
TO BA BOARD D
TO BA BOARD C
TO QB BOARD (PVM-1444QM)
TO QD BOARD (PVM-1442QM)
TO QG BOARD (PVM-1440QM) A
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X358 CV3
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L1300
L1303
L1301
BUFF Q1300
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X SELECT SW Q1301
3.58 GATE 1,2 Q1303,1305
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IC1400
4.43 OUT
KILLER OUT
D1400
SYS KILLER
COL CONT KIL Q1403
COLOR OUT
COMPOSITE
COMPOSITE Y IN
Y IN
SY IN
DL301
SY AMP1-3 Q306-308
IC303
Y SW
ACC IN
SC IN
CHROMA BUFF Q305
IC312
S SW
COMPOSITE SEL IN
IC302
CHROMA BUFF Q309
RV002 ACC
ACC ADJ
BURST OUT
SECAM H
SECAM SW Q31
SECAM SW Q411
BURST MUTE Q410
D302
V (R-Y)
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H PLS
BURST IN
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D306
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SHARP VL BUFF Q414
PLS X SW
AUDIO IN
KILLER H
KILLER IN
4.43 IN
4.43 OUT
4.43 OUT
S BP
SIRCS
HUE CONT
50H
D1014
SW Q415
RV1709 R BKG
RV1708 B BKG
R CLAMP Q1709
B CLAMP Q1708
R BUFF Q1710
B BUFF Q1711
EXT R OUT
EXT B OUT
RV1705 R BKG
RV1704 B BKG
RV1707 R BKG
RV1706 B BKG
RV1703 R DRV
RV1702 B DRV
RV1701 R DRV
RV1700 B DRV
R IK
G IK
B IK
D1703
D1704
D1702
D1701
RV1710 SUB BRT
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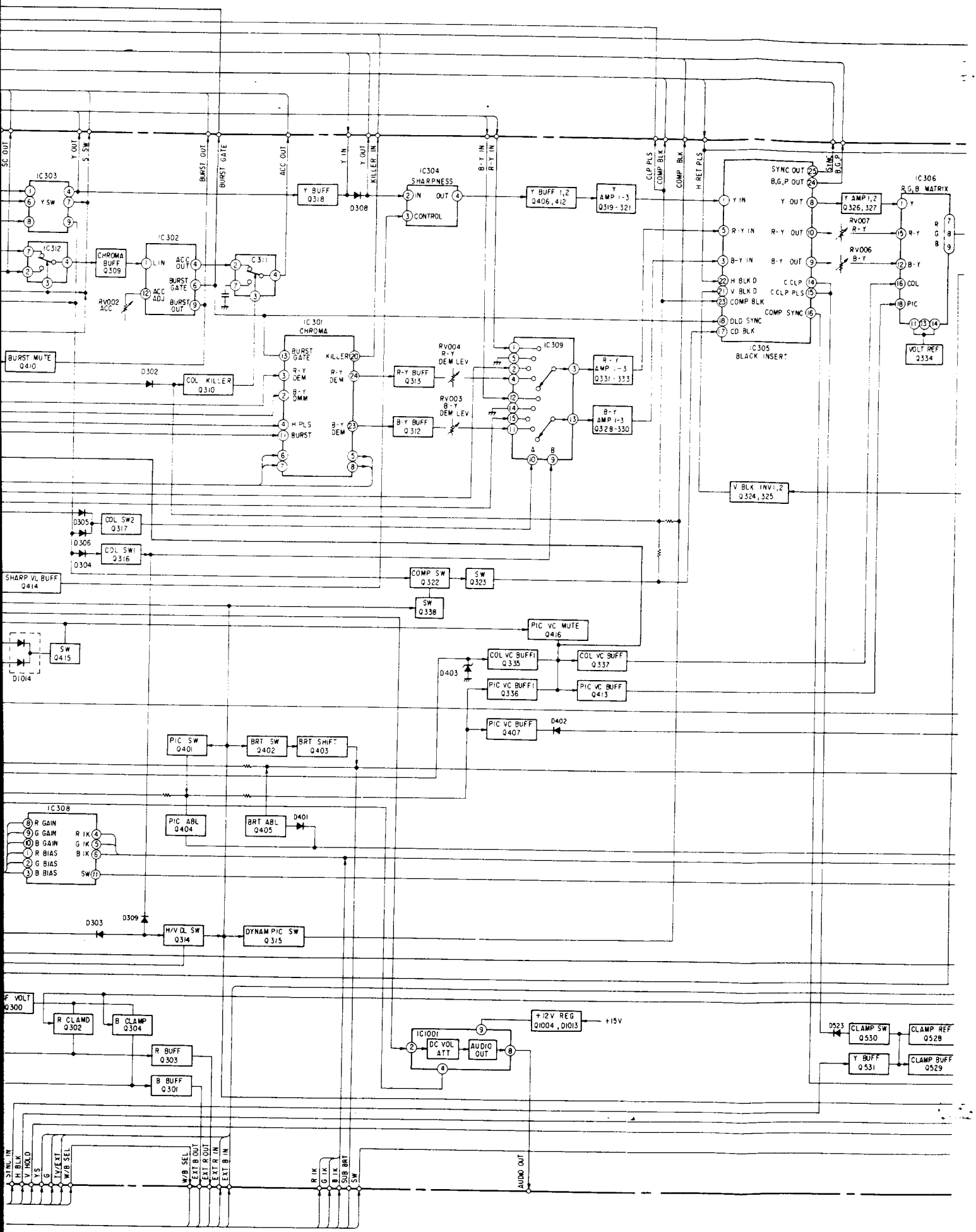
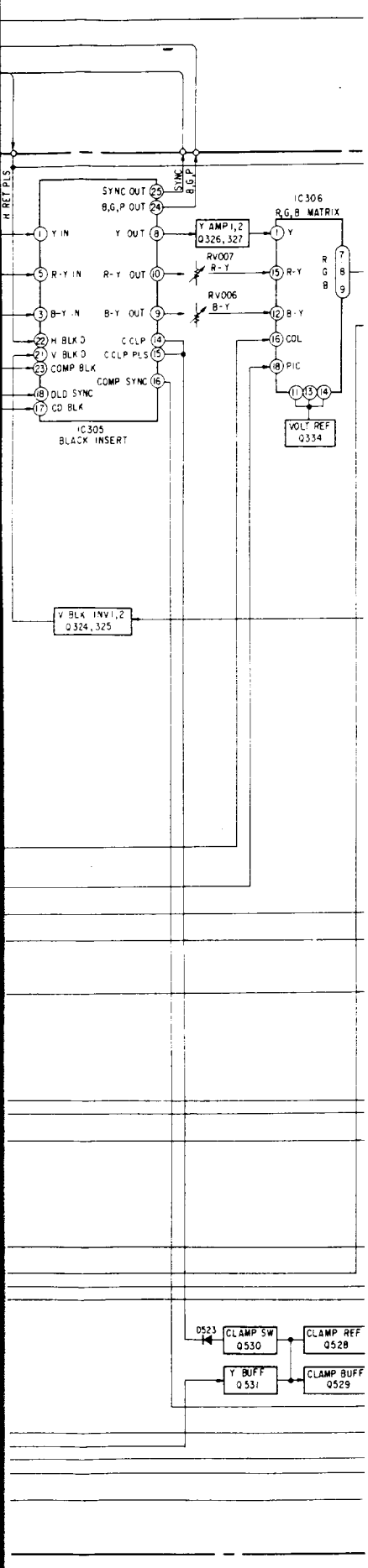
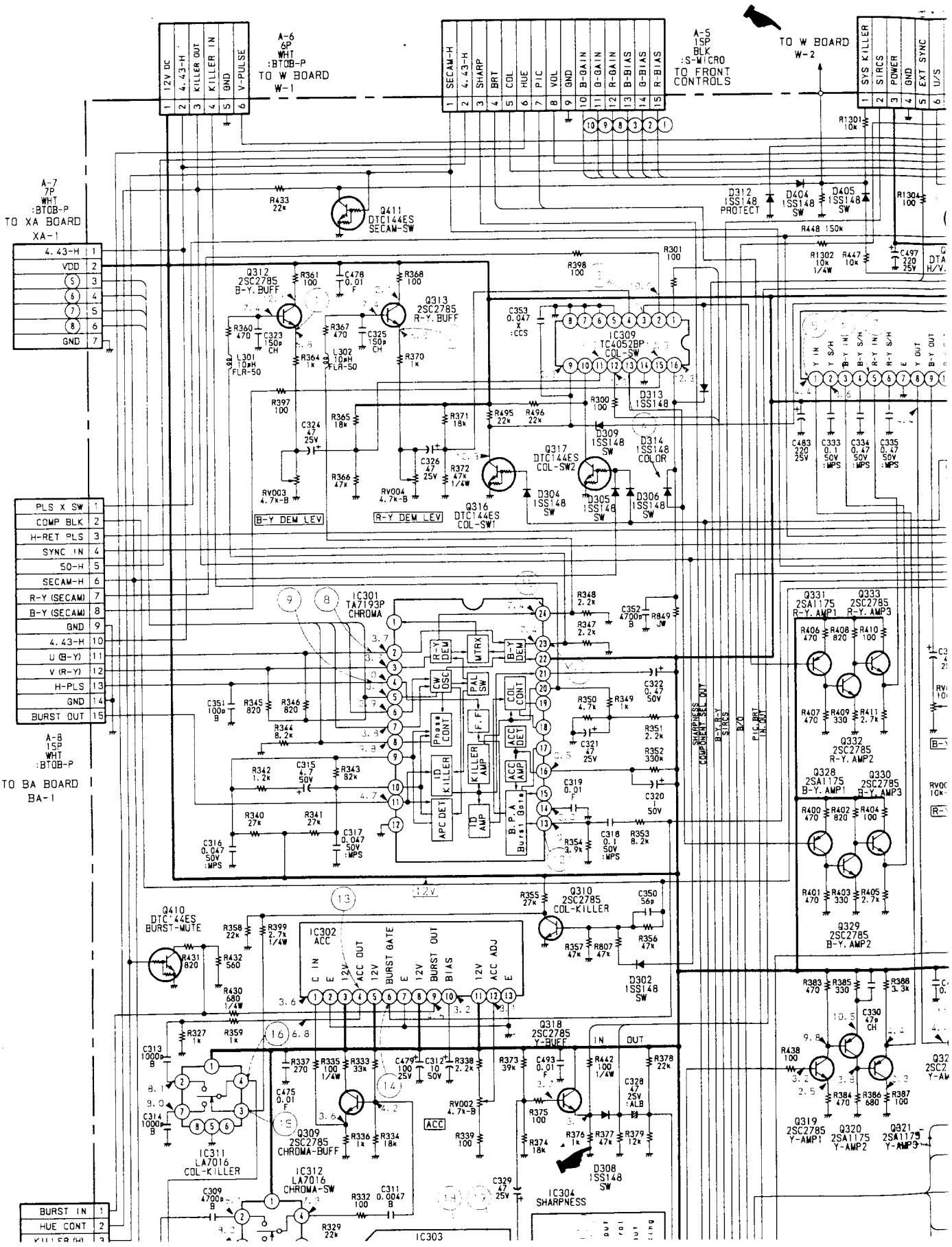
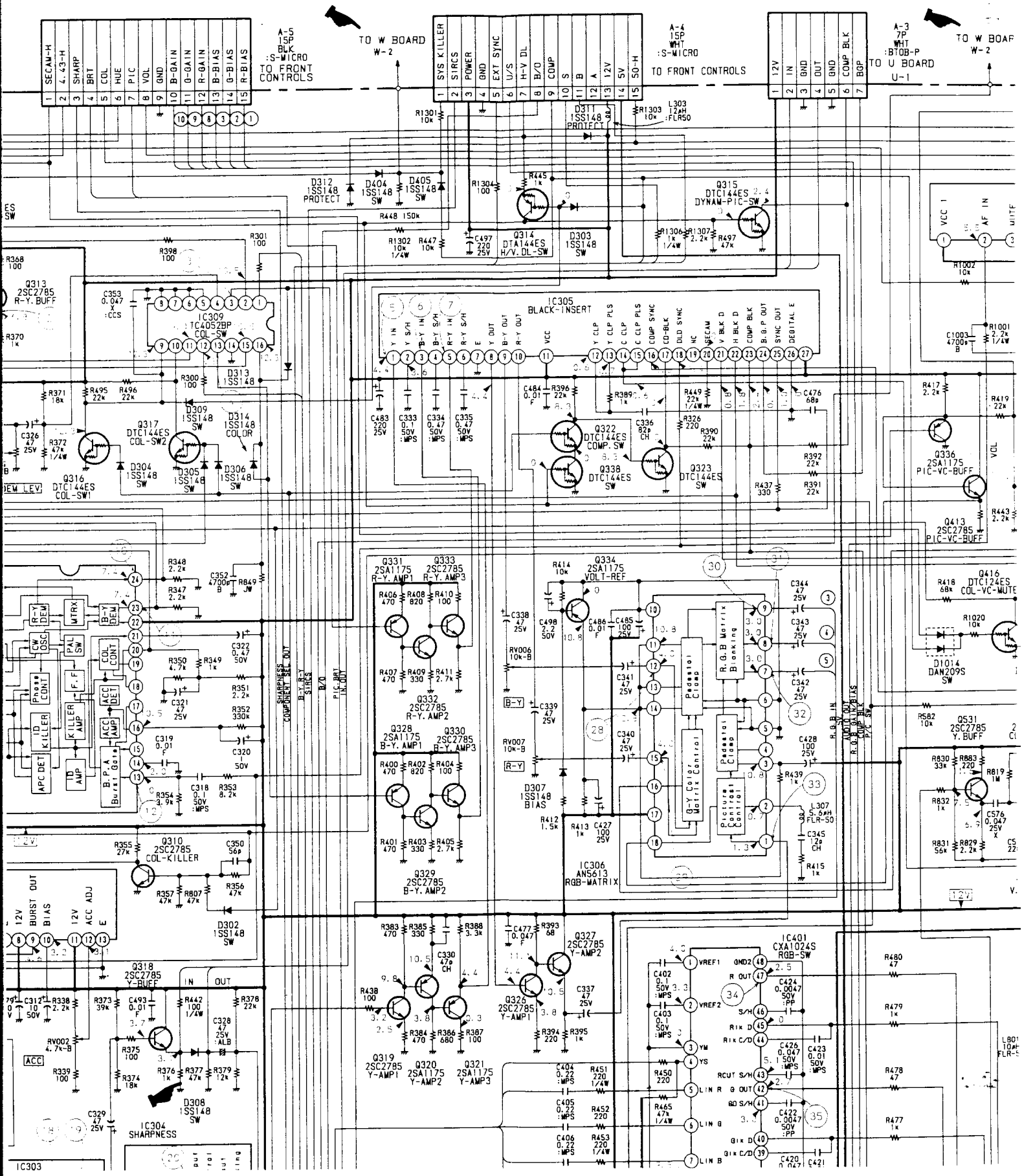
COL TEMP SW4 Q1703
COL TEMP SW2 Q1701
COL TEMP SW1 Q1700
COL TEMP SW5 Q1706
COL TEMP SW6 Q1707
D1706
D1708
D1705
D1707
IK SW1 Q1704
IK SW2 Q1705
D1700
ITE BALANCE)
A-5
SECAM H
4.43 H
SHARP
BRT
COL
HUE
PIC
VOL
GND
B GAIN
G GAIN
R GAIN
B BIAS
G BIAS
R BIAS
IC308
R GAIN
G GAIN
B GAIN
R BIAS
G BIAS
B BIAS
R IK
G IK
B IK
SW
TO CONTROL UNIT
A-4
SYS KILLER
SIRCS
POWER
GND
EXT SYNC
U/S
H-V DL
B/Q
COMP/RGB SW
S BP
LINE B
LINE A
+12V
+5V
50H
D404
D405
D303
D309
REF VOLT Q300
R CLAMD Q302
B CLAMP Q304
T603 SRT
PS602
+115V
+B RECT D651
7V RECT D652
+7V
15V RECT D653
+15V
D613
CURRENT Q612
FQ SHIFT Q615
OSC
SOFT START
CLAMP
ECL
LATCH
OUT PUT
DRIVE Q614
T602
CONV TR Q613
IC602
D654
IC651
RV601 115V ADJ
TO C BOARD
TO QB BOARD (PVM-1444QM)
TO QD BOARD (PVM-1442QM)
TO QG BOARD (PVM-1440QM)
B
A (SIGNAL, DEAL WITH DEFLECTION SYSTEM)
LINE B
EXT SYNC
COMP/RGB SW
R
B
SYNC IN
H BLK
V HOLD
Y S
G
TV/EXT
W/B SEL

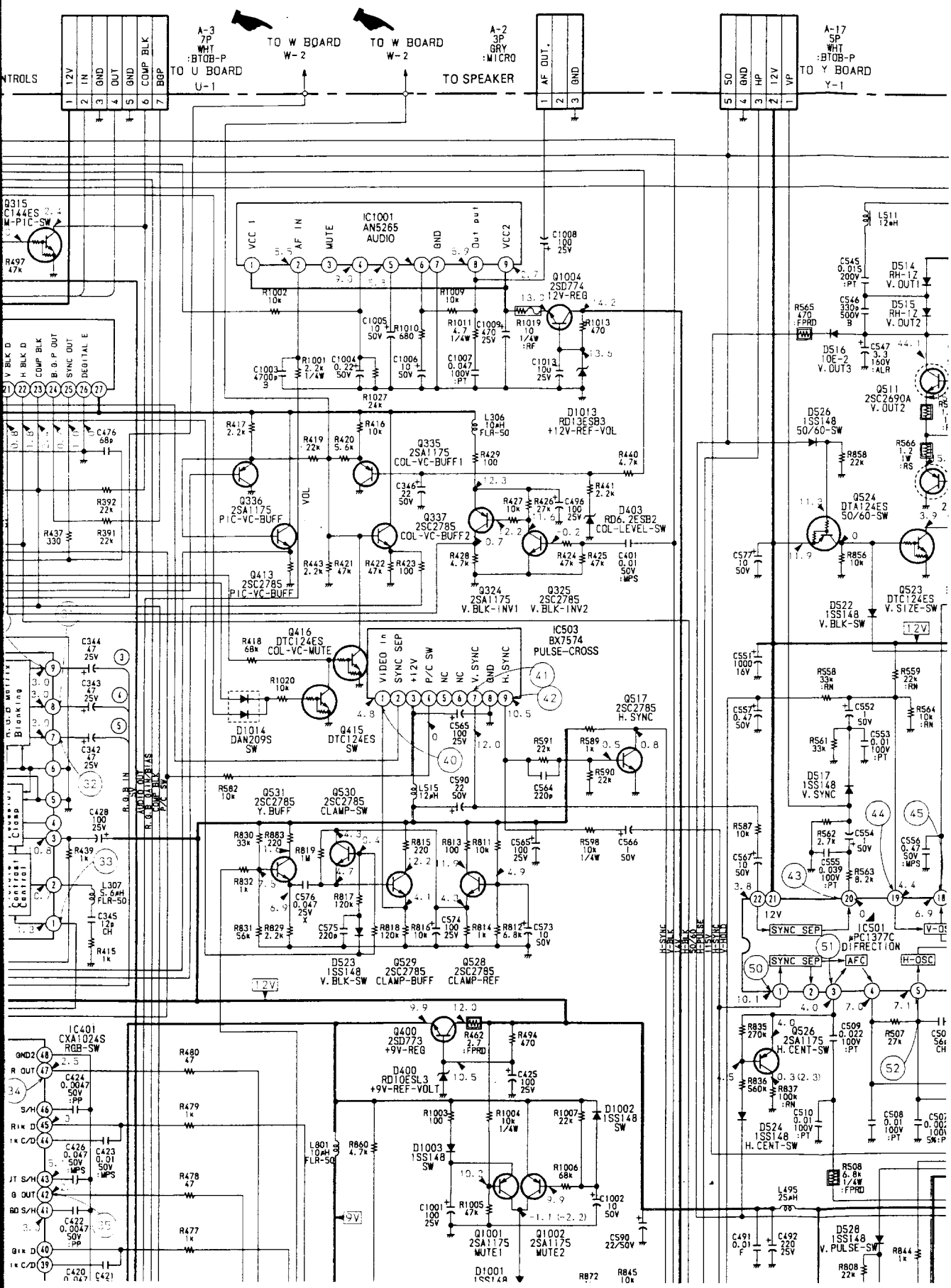

IC303
Y SW
IC312
IC302
CHROMA BUFF Q309
ACC ADJ
BURST GATE
BURST OUT
C311
RV002 ACC
IC301 CHROMA
BURST MUTE Q410
D302
COL KILLER Q310
BURST GATE
KILLER
R-Y DEM
B-Y DEM
H PLS
BURST
R-Y BUFF Q313
B-Y BUFF Q312
RV004 R-Y DEM LEV
RV003 B-Y DEM LEV
IC309
R-Y AMP 1-3 Q331-333
B-Y AMP 1-3 Q328-330
Y BUFF Q318
D308
IC304 SHARPNESS
IN
OUT
CONTROL
Y BUFF 1,2 Q406,412
Y AMP 1-3 Q319-321
CLP PLS
COMP BLK
H RET PLS
SYNC OUT
B,G,P OUT
IC305 BLACK INSERT
Y IN
R-Y IN
B-Y IN
H BLK D
V BLK D
COMP BLK
DLD SYNC
CD BLK
C CLP
C CLP PLS
COMP SYNC
Y OUT
R-Y OUT
B-Y OUT
Y AMP 1,2 Q326,327
RV007 R-Y
RV006 B-Y
IC306 R,G,B MATRIX
R
G
B
COL
PIC
VOLT REF Q334
V BLK INV 1,2 Q324,325
D305
COL SW2 Q317
D306
COL SW1 Q316
D304
SHARP VL BUFF Q414
COMP SW Q322
SW Q323
SW Q338
SW Q415
D1014
PIC VC MUTE Q416
COL VC BUFF1 Q335
COL VC BUFF Q337
D403
PIC VC BUFF1 Q336
PIC VC BUFF Q413
PIC VC BUFF Q407
D402
PIC SW Q401
BRT SW Q402
BRT SHIFT Q403
IC308
R GAIN
G GAIN
B GAIN
R BIAS
G BIAS
B BIAS
R IK
G IK
B IK
SW
PIC ABL Q404
BRT ABL Q405
D401
D303
D309
H/V DL SW Q314
DYNAM PIC SW Q315
F VOLT Q300
R CLAMD Q302
B CLAMP Q304
R BUFF Q303
B BUFF Q301
IC1001
DC VOL ATT
AUDIO OUT
+12V REG Q1004, D1013
+15V
D523
CLAMP SW Q530
CLAMP REF Q528
Y BUFF Q531
CLAMP BUFF Q529
SYNC IN
H BLK
V HOLD
Y/S
G
TV/EXT
W/B SEL
W/B SEL
EXT B OUT
EXT R OUT
EXT R IN
EXT B IN
R IK
G IK
B IK
SUB BRT SW
AUDIO OUT

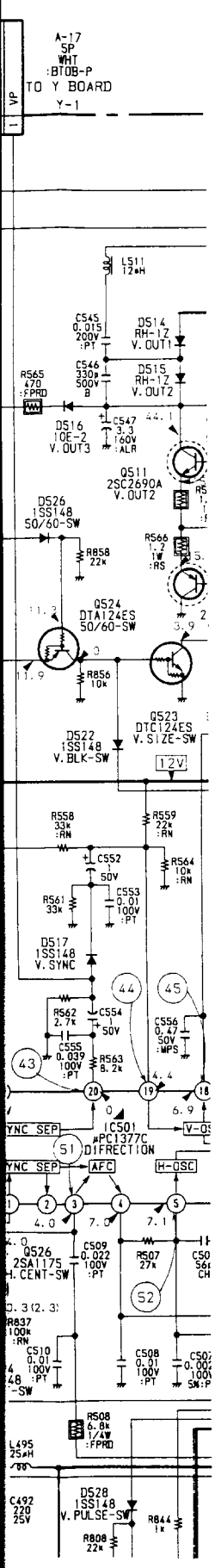

H RET PLS
SYNC OUT 25
B,G,P OUT 24
SYNC B,G,P
IC306
R,G,B MATRIX
1 Y IN
Y OUT 8
Y AMP 1,2 Q326, 327
1 Y
5 R-Y IN
R-Y OUT 10
RV007 R-Y
15 R-Y
R G B 7 8 9
3 B-Y IN
B-Y OUT 9
RV006 B-Y
12 B-Y
22 H BLK D
C CLP 14
16 COL
21 V BLK D
CCLP PLS 15
18 PIC
23 COMP BLK
COMP SYNC 16
18 OLD SYNC
17 CD BLK
11 13 14
VOLT REF Q334
IC305
BLACK INSERT
V BLK INV 1,2 Q324, 325
D523
CLAMP SW Q530
CLAMP REF Q528
Y BUFF Q531
CLAMP BUFF Q529

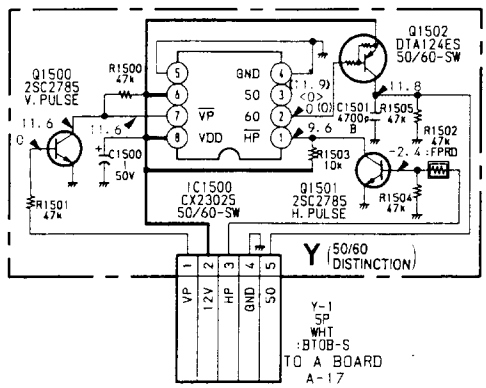
6-5. SCHEMATIC DIAGRAM Page 42 - 45



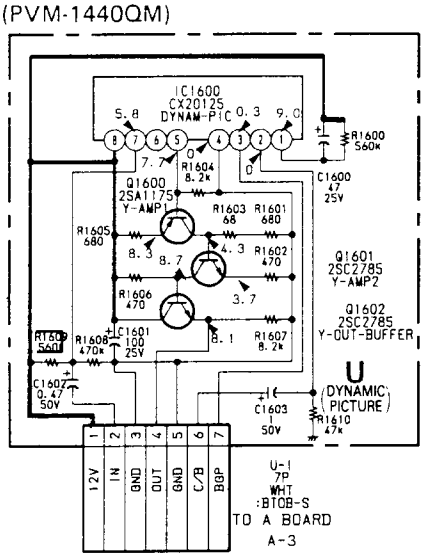

A-5
15P
BLK
:S-MICRO
TO FRONT
CONTROLS
TO W BOARD
W-2
A-4
15P
WHT
:S-MICRO
TO FRONT CONTROLS
A-3
7P
WHT
:BTOB-P
TO U BOARD
U-1
TO W BOAF
W-2
SECAM-H
4.43-H
SHARP
BRT
COL
HUE
PIC
VOL
GND
B-GAIN
G-GAIN
R-GAIN
B-BIAS
G-BIAS
R-BIAS
SYS KILLER
SIRCS
POWER
GND
EXT SYNC
U/S
H-V DL
B/O
COMP
S
B
A
12V
5V
SO-H
12V
IN
GND
OUT
GND
COMP BLK
BGP
IC305
BLACK-INSERT
IC309
TC4052BP
COL-SW
IC306
AN5613
RGB-MATRIX
IC401
CXA1024S
RGB-SW
IC304
SHARPNESS
IC303
Q313
2SC2785
R-Y. BUFF
Q314
DTA144ES
H/V. DL-SW
Q315
DTC144ES
DYNAM-PIC-SW
Q316
DTC144ES
COL-SW1
Q317
DTC144ES
COL-SW2
Q318
2SC2785
Y-BUFF
Q319
2SC2785
Y-AMP1
Q320
2SA1175
Y-AMP2
Q321
2SA1175
Y-AMP3
Q322
DTC144ES
COMP. SW
Q323
DTC144ES
SW
Q326
2SC2785
Y-AMP1
Q327
2SC2785
Y-AMP2
Q328
2SA1175
B-Y. AMP1
Q329
2SC2785
B-Y. AMP2
Q330
2SC2785
B-Y. AMP3
Q331
2SA1175
R-Y. AMP1
Q332
2SC2785
R-Y. AMP2
Q333
2SC2785
R-Y. AMP3
Q334
2SA1175
VOLT-REF
Q336
2SA1175
PIC-VC-BUFF
Q338
DTC144ES
SW
Q413
2SC2785
PIC-VC-BUFF
Q416
DTC124ES
COL-VC-MUTE
Q531
2SC2785
Y. BUFF
D301
1SS148
PROTECT
D303
1SS148
SW
D304
1SS148
SW
D305
1SS148
SW
D306
1SS148
SW
D307
1SS148
BIAS
D308
1SS148
SW
D309
1SS148
SW
D310
1SS148
SW
D311
1SS148
PROTECT
D312
1SS148
PROTECT
D313
1SS148
D314
1SS148
COLOR
D404
1SS148
SW
D405
1SS148
SW
D1014
DAN209S
SW
L303
12uH
:FLR50
L307
5.6uH
FLR-50
L801
10uH
FLR-5
R1001
2.2k
1/4W
R1002
10k
C1003
4700p
B
R1301
10k
R1303
10k
R1304
100
R1306
1k
1/4W
R1307
2.2k
R497
47k
R445
1k
R448
150k
R1302
10k
1/4W
R447
10k
C497
220
25V
R301
100
R398
100
R368
100
R370
1k
R371
18k
R495
22k
R496
22k
R372
47k
1/4W
C326
47
25V
R300
100
C353
0.047
X
:CCS
C483
220
25V
C333
0.1
50V
:MPS
C334
0.47
50V
:MPS
C335
0.47
50V
:MPS
C484
0.01
F
R396
22k
R389
1k
R449
22k
1/4W
C476
68p
R326
220
R390
22k
R392
22k
R391
22k
R437
330
C336
82p
CH
R417
2.2k
R419
22k
VOL
R443
2.2k
R348
2.2k
R347
2.2k
C352
4700p
B
R849
JW
C322
0.47
50V
R350
4.7k
R349
1k
R351
2.2k
C321
47
25V
R352
330k
C320
50V
C319
0.01
F
C318
0.1
50V
:MPS
R353
8.2k
R354
3.9k
R355
27k
C350
56p
R356
47k
R357
47k
R807
47k
R338
2.2k
R373
39k
C493
0.01
F
R442
100
1/4W
R378
22k
C328
47
25V
:ALB
RV002
4.7k-B
R339
100
R375
100
R374
18k
R376
1k
R377
47k
R379
12k
C329
47
25V
R383
470
R385
330
R388
3.3k
C330
47p
CH
R438
100
R384
470
R386
680
R387
100
C477
0.047
F
R393
68
C337
47
25V
R394
220
R395
1k
R414
10k
C338
47
25V
C498
2.2
50V
C486
0.01
F
C485
100
25V
C344
47
25V
C343
47
25V
C342
47
25V
C341
47
25V
C339
47
25V
C340
47
25V
C428
100
25V
RV006
10k-B
RV007
10k-B
R439
1k
R412
1.5k
R413
1k
C427
100
25V
C345
12p
CH
R415
1k
R582
10k
R1020
10k
R418
68k
R830
33k
R883
220
R819
1M
R832
1k
R831
56k
R829
2.2k
C576
0.047
25V
X
R480
47
R479
1k
R478
47
R477
1k
C402
0.1
50V
:MPS
C403
0.1
50V
:MPS
C424
0.0047
50V
:PP
C426
0.047
50V
:MPS
C423
0.01
50V
:MPS
C422
0.0047
50V
:PP
C420
C421
R450
220
R465
47k
1/4W
C404
0.22
:MPS
C405
0.22
:MPS
C406
0.22
:MPS
R451
220
1/4W
R452
220
R453
220
1/4W
R368
100
R369
1k
R370
1k
R371
18k
R372
47k
1/4W
R373
39k
R374
18k
R375
100
R376
1k
R377
47k
R378
22k
R379
12k
R383
470
R384
470
R385
330
R386
680
R387
100
R388
3.3k
R393
68
R394
220
R395
1k
R396
22k
R397
47k
R398
100
R400
470
R401
470
R402
820
R403
330
R404
100
R405
2.7k
R406
470
R407
470
R408
820
R409
330
R410
100
R411
2.7k
R412
1.5k
R413
1k
R414
10k
R415
1k
R417
2.2k
R418
68k
R419
22k
R437
330
R438
100
R439
1k
R440
2.7k
R441
2.7k
R442
100
1/4W
R443
2.2k
R447
10k
R448
150k
R449
22k
1/4W
R450
220
R451
220
1/4W
R452
220
R453
220
1/4W
R465
47k
1/4W
R477
1k
R478
47
R479
1k
R480
47
R497
47k
R582
10k
R807
47k
R830
33k
R831
56k
R832
1k
R883
220
R1001
2.2k
1/4W
R1002
10k
R1020
10k
R1301
10k
R1302
10k
1/4W
R1303
10k
R1304
100
R1306
1k
1/4W
R1307
2.2k
C312
10
50V
C321
47
25V
C322
0.47
50V
C326
47
25V
C328
47
25V
:ALB
C329
47
25V
C330
47p
CH
C333
0.1
50V
:MPS
C334
0.47
50V
:MPS
C335
0.47
50V
:MPS
C336
82p
CH
C338
47
25V
C339
47
25V
C340
47
25V
C341
47
25V
C342
47
25V
C343
47
25V
C344
47
25V
C345
12p
CH
C350
56p
C352
4700p
B
C353
0.047
X
:CCS
C402
0.1
50V
:MPS
C403
0.1
50V
:MPS
C404
0.22
:MPS
C405
0.22
:MPS
C406
0.22
:MPS
C420
C421
C422
0.0047
50V
:PP
C423
0.01
50V
:MPS
C424
0.0047
50V
:PP
C426
0.047
50V
:MPS
C427
100
25V
C428
100
25V
C476
68p
C477
0.047
F
C483
220
25V
C484
0.01
F
C485
100
25V
C486
0.01
F
C493
0.01
F
C497
220
25V
C498
2.2
50V
C576
0.047
25V
X
D301
1SS148
PROTECT
D302
1SS148
SW
D303
1SS148
SW
D304
1SS148
SW
D305
1SS148
SW
D306
1SS148
SW
D307
1SS148
BIAS
D308
1SS148
SW
D309
1SS148
SW
D310
1SS148
SW
D311
1SS148
PROTECT
D312
1SS148
PROTECT
D313
1SS148
D314
1SS148
COLOR
D404
1SS148
SW
D405
1SS148
SW
D1014
DAN209S
SW
L303
12uH
:FLR50
L307
5.6uH
FLR-50
L801
10uH
FLR-5
RV002
4.7k-B
RV006
10k-B
RV007
10k-B
ACC
B-Y
R-Y
R.G.B IN
AUDIO OUT
R.G.B OUT
BLK
P/C SW
VCC 1
AF IN
WITF
R.G.B Matrix Blanking
Pedestal Clamp
B-Y Color Matrix Control
Picture Control
Pedestal Clamp
R-Y DEM
B-Y DEM
MTRX
CW OSC
PAL SW
COL CONT
Phase CONT
F.F
ACC DET
ACC AMP
ID KILLER
KILLER AMP
APC DET
ID AMP
B.P.A Burst Gate
SHARPNESS
COMPONENT SW
B-Y R-Y SYNCS
B/O
P/C BRT
TX OUT
12V
BURST OUT
BIAS
12V
ACC ADJ
E
IN
OUT
VREF1
VREF2
YM
YS
LIN R
LIN G
LIN B
GND2
R OUT
RIN D
RIN C/D
RCUT S/H
G OUT
GIN S/H
GIN D
GIN C/D

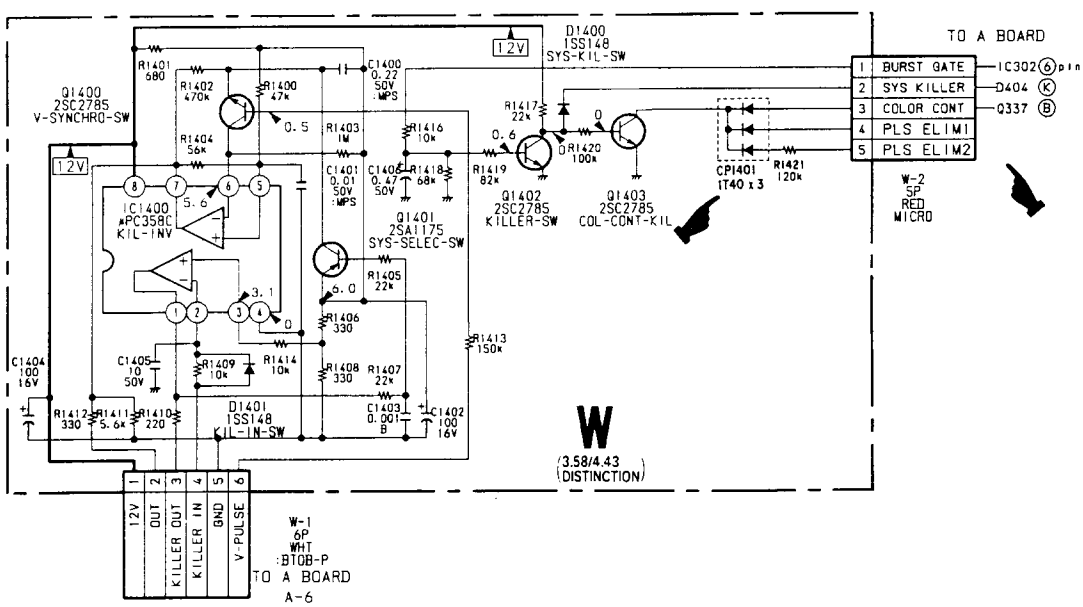

A-3
7P
WHT
:BTOB-P
TO U BOARD
U-1
TO W BOARD
W-2
TO W BOARD
W-2
A-2
3P
GRY
:MICRO
TO SPEAKER
A-17
5P
WHT
:BTOB-P
TO Y BOARD
Y-1
IC1001
AN5265
AUDIO
IC503
BX7574
PULSE-CROSS
IC501
μPC1377C
DIFRECTION
IC401
CXA1024S
RGB-SW
Q1004
2SD774
12V-REG
Q400
2SD773
+9V-REG
Q335
2SA1175
COL-VC-BUFF1
Q336
2SA1175
PIC-VC-BUFF
Q337
2SC2785
COL-VC-BUFF2
Q413
2SC2785
PIC-VC-BUFF
Q324
2SA1175
V. BLK-INV1
Q325
2SC2785
V. BLK-INV2
Q416
DTC124ES
COL-VC-MUTE
Q415
DTC124ES
SW
Q531
2SC2785
Y. BUFF
Q530
2SC2785
CLAMP-SW
Q529
2SC2785
CLAMP-BUFF
Q528
2SC2785
CLAMP-REF
Q517
2SC2785
H. SYNC
Q526
2SA1175
H. CENT-SW
Q524
DTA124ES
50/60-SW
Q523
DTC124ES
V. SIZE-SW
Q511
2SC2690A
V. OUT2
Q1001
2SA1175
MUTE1
Q1002
2SA1175
MUTE2
D1013
RD13ESB3
+12V-REF-VOL
D403
RD6.2ESB2
COL-LEVEL-SW
D400
RD10ESL3
+9V-REF-VOLT
D1014
DAN209S
SW
D514
RH-1Z
V. OUT1
D515
RH-1Z
V. OUT2
D516
10E-2
V. OUT3
D522
1SS148
V. BLK-SW
D523
1SS148
V. BLK-SW
D524
1SS148
H. CENT-SW
D526
1SS148
50/60-SW
D528
1SS148
V. PULSE-SW
D517
1SS148
V. SYNC
L306
10μH
FLR-50
L307
5.6μH
FLR-50
L511
12mH
L515
12μH
L801
10μH
FLR-50
L495
25μH
VIDEO In
SYNC SEP
+12V
P/C SW
V. SYNC
H. SYNC
SYNC SEP
AFC
H-OSC
12V
9V


A-17
5P
WHT
:BTOB-P
TO Y BOARD
Y-1
VP
L511
12μH
C545
0.015
200V
:PT
D514
RH-1Z
V. OUT1
C546
330n
500V
B
D515
RH-1Z
V. OUT2
R565
470
:FPRD
D516
10E-2
V. OUT3
C547
3.3
160V
:ALR
Q511
2SC2690A
V. OUT2
D526
1SS148
50/60-SW
R858
22k
R566
1.2
1W
:RS
Q524
DTA124ES
50/60-SW
R856
10k
Q523
DTC124ES
V. SIZE-SW
D522
1SS148
V. BLK-SW
12V
R558
33k
:RN
R559
22k
:RN
C552
50V
R564
10k
:RN
R561
33k
C553
0.01
100V
:PT
D517
1SS148
V. SYNC
R562
2.7k
C554
50V
C556
0.47
50V
:MPS
C555
0.039
100V
:PT
R563
8.2k
IC501
μPC1377C
DIFRECTION
YNC SEP
AFC
H-OSC
Q526
2SA1175
H. CENT-SW
R837
100k
:RN
C510
0.01
100V
:PT
C509
0.022
100V
:PT
R507
27k
C508
0.01
100V
:PT
R508
6.8k
1/4W
:FPRD
L495
25μH
C492
220
25V
D528
1SS148
V. PULSE-SW
R844
1k
R808
22k

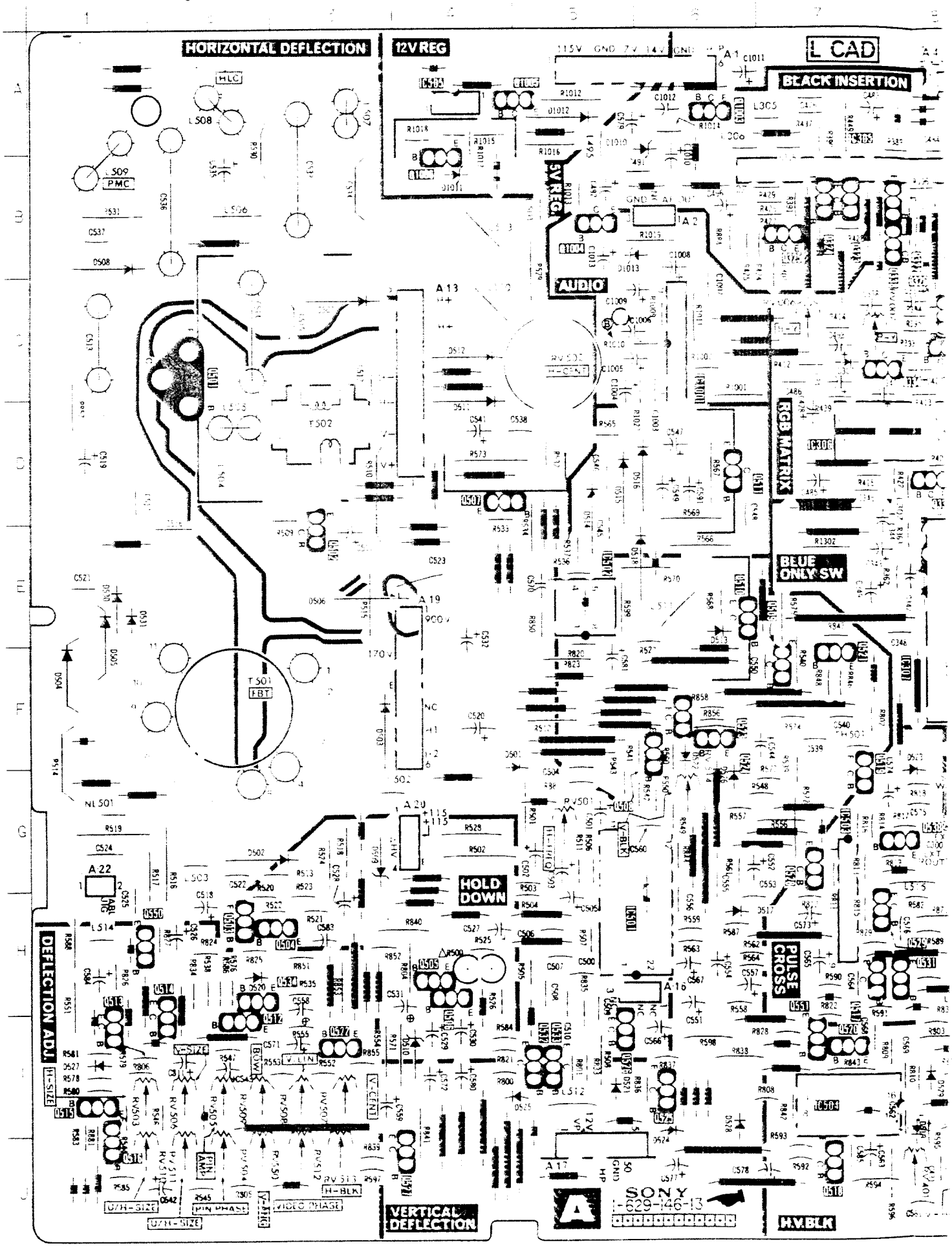

Q1500
2SC2785
V. PULSE
R1500
47k
Q1502
DTA124ES
50/60-SW
IC1500
CX23025
50/60-SW
Q1501
2SC2785
H. PULSE
C1500
1
50V
C1501
4700p
B
R1501
47k
R1502
47k
:FPRD
R1503
10k
R1504
47k
R1505
47k
BND
50
60
VDD
VP
HP
Y
50/60
DISTINCTION
VP
12V
HP
GND
50
Y-1
5P
WHT
:BTOB-S
TO A BOARD
A-17

(PVM-1440QM)


IC1600
CX20125
DYNAM-PIC
Q1600
2SA1175
Y-AMP1
Q1601
2SC2785
Y-AMP2
Q1602
2SC2785
Y-OUT-BUFFER
R1600
560k
R1601
680
R1602
470
R1603
68
R1604
8.2k
R1605
680
R1606
470
R1607
8.2k
R1608
470k
R1609
560
C1600
47
25V
C1601
100
25V
C1602
0.47
50V
C1603
1
50V
R1610
47k
U
DYNAMIC
PICTURE
12V
IN
GND
OUT
GND
C/B
BGP
U-1
7P
WHT
:BTOB-S
TO A BOARD
A-3

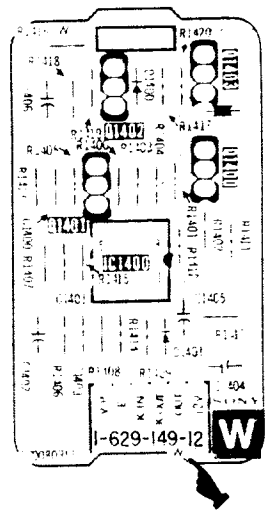

Q1400
2SC2785
V-SYNCHRO-SW
IC1400
μPC358C
KIL-INV
Q1401
2SA1175
SYS-SELEC-SW
D1400
1SS148
SYS-KIL-SW
Q1402
2SC2785
KILLER-SW
Q1403
2SC2785
COL-CONT-KIL
D1401
1SS148
KIL-IN-SW
CPI401
IT40 x 3
12V
TO A BOARD
1 BURST GATE
2 SYS KILLER
3 COLOR CONT
4 PLS ELIM1
5 PLS ELIM2
IC302 6 pin
D404 K
Q337 B
W-2
5P
RED
MICRO
W
3.58/4.43
DISTINCTION
12V
OUT
KILLER OUT
KILLER IN
GND
V-PULSE
W-1
6P
WHT
:BTOB-P
TO A BOARD
A-6

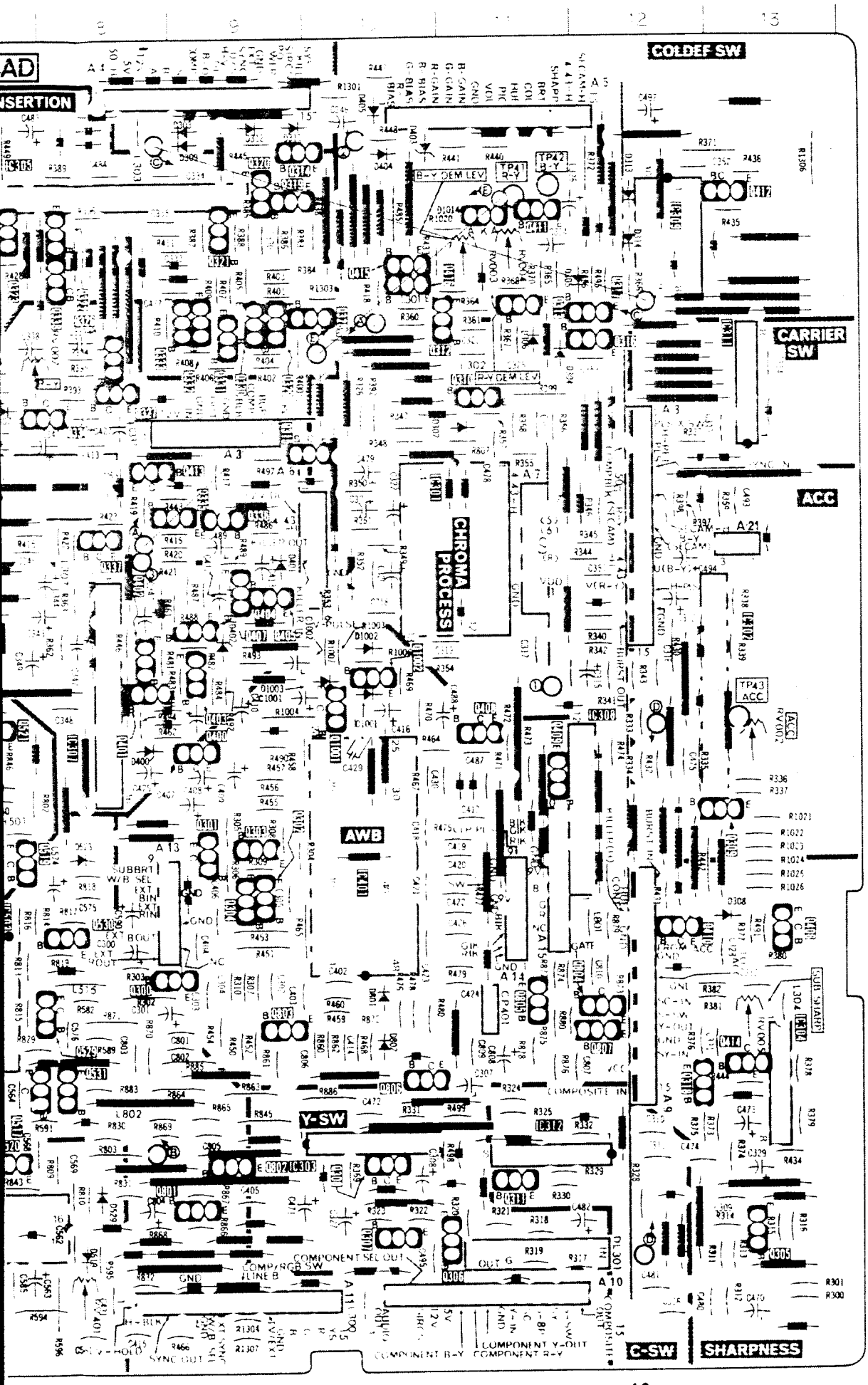
6-3. PRINTED WIRING BOARDS – *Conductor Side* – **A** [SIGNAL PROCESS, DEFLECTION SYSTEM]
– A Board – Page 36, 37, and 39



W 3.58/4.43 DISTINCTION

— W Board —





7-1. CHASSIS

Page 71

REF.NO.	PART NO.	DESCRIPTION	REMARK
1	⚠*3-704-372-01	HOLDER, HV CABLE	
2	⚠1-237-614-12	RESISTOR ASSY, HIGH-VOLTAGE	
3	*4-391-842-01	BRACKET, HVR	
4	X-4391-805-1	CABINET ASSY, BOTTOM	
5	*A-1245-456-A	FE BOARD, COMPLETE	
6	*A-1291-616-A	A BOARD, COMPLETE	
7	⚠1-439-395-12	TRANSFORMER ASSY, FLYBACK	
8	*1-629-149-12	W BOARD	
9	*1-629-151-11	XA BOARD	
10	*1-629-150-11	Y BOARD	
11	*1-629-148-11	V BOARD	
12	*1-629-219-11	U BOARD (PVM-1440QM ONLY)	
14	*A-1135-564-A	BA BOARD, COMPLETE (PVM-1440QM ONLY)	
	*A-1135-573-A	BA BOARD, COMPLETE (PVM-1442QM/1444QM ONLY)	
15	*A-1270-249-A	QE BOARD, COMPLETE (PVM-1442QM ONLY)	
16	*A-1270-267-A	QG BOARD, COMPLETE (PVM-1440QM ONLY)	
	*A-1270-248-A	QD BOARD, COMPLETE (PVM-1442QM ONLY)	
	*A-1270-246-A	QB BOARD, COMPLETE (PVM-1444QM ONLY)	
17	*A-1270-266-A	QF BOARD, COMPLETE (PVM-1440QM ONLY)	
	*A-1270-247-A	QC BOARD, COMPLETE (PVM-1442QM ONLY)	
	*A-1270-245-A	QA BOARD, COMPLETE (PVM-1444QM ONLY)	
18	4-391-843-32	PLATE, TERMINAL (PVM-1440QM ONLY)	
	4-391-843-12	PLATE, TERMINAL (PVM-1442QM ONLY)	
	4-391-843-02	PLATE, TERMINAL (PVM-1444QM ONLY)	
19	*3-682-419-01	HOLDER, P.C.B	

7-2. PICTURE TUBE

Page 72

REF.NO.	PART NO.	DESCRIPTION	REMARK
51	1-466-113-11	CONTROL UNIT (PVM-1440QM ONLY)	
	1-466-076-11	CONTROL UNIT (PVM-1442QM ONLY)	
	1-466-198-11	CONTROL UNIT (PVM-1444QM ONLY)	
53	1-544-063-11	SPEAKER	
54	4-374-839-11	BUTTON (A)	
55	4-391-824-01	JOINT	
56	⚠1-554-967-12	SWITCH, PUSH (AC POWER)(1 KEY)	
57	*4-391-820-01	COVER, AC SWITCH	
58	X-4391-804-1	BEZEL ASSY (PVM-1442QM/44QM ONLY)	
	X-4391-804-2	BEZEL ASSY (PVM-1440QM ONLY)	
59	⚠8-736-254-05	PICTURE TUBE (A34JHS10X) (PVM-1440QM ONLY)	
	⚠8-734-621-05	PICTURE TUBE (M34KBE31X) (PVM-1442QM/1444QM ONLY)	
60	3-703-961-01	SPACER, DY	
61	⚠1-451-329-11	DEFLECTION YOKE (Y14FZA)	
62	*4-382-050-01	BAND, C PC BOARD	
64	*A-1330-986-A	C BOARD, COMPLETE	
66	*4-391-835-01	PLATE (C), SHIELD (PVM-1442QM ONLY)	
67	*4-374-912-01	COVER (MAIN), CV VOL	
68	*4-374-913-01	COVER (REAR LID), CV VOL	
69	⚠1-426-145-13	COIL, DEGAUSSING	
70	4-307-249-00	SCREW (5), TAPPING	
71	4-391-833-01	CLOTH, PROTECTION	
72	4-391-839-01	COVER, REAR	
73	X-4391-810-1	COVER ASSY, TOP	
74	4-391-825-01	RIVET, NYLON	
75	⚠*4-364-745-01	BUSHING, AC CORD	
76	⚠1-574-389-12	CORD, POWER	
77	4-308-870-00	CLIP, LEAD WIRE	
78	1-452-032-00	MAGNET, DISK; 10MMφ	
79	1-452-094-00	MAGNET, ROTATABLE DISK; 15MMφ	
80	X-4309-608-0	PERMALLOY ASSY, CONVERGENCE	
82	*1-629-153-11	J BOARD	
83	1-543-604-11	CORE, RING	
84	4-847-802-11	SCREW (OS), CASE, CLAW	
85	1-452-277-00	MAGNET BMC	

SECTION 8
ELECTRICAL PARTS LIST

-A BOARD- Page 83

Ref.No.	Part No.	Description	Remark
☛	*A-1291-616-A	A BOARD, COMPLETE **********	
	*4-329-153-00	HEAT SINK, V OUT	
	*4-341-751-01	EYELET	
	*4-341-752-01	EYELET	
	*4-363-404-00	HOLDER, IC	
	4-363-414-00	SPACER, MICA	

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Ref.No.	Part No.	Description				Remark
R361	1-249-405-11	CARBON	100	5%	1/4W	
R362	1-249-410-11	CARBON	270	5%	1/4W	
R363	1-249-432-11	CARBON	18K	5%	1/4W	
R364	1-249-417-11	CARBON	1K	5%	1/4W	
R365	1-249-432-11	CARBON	18K	5%	1/4W	
R366	1-249-437-11	CARBON	47K	5%	1/4W	
R367	1-249-413-11	CARBON	470	5%	1/4W	
R368	1-249-405-11	CARBON	100	5%	1/4W	
R369	1-249-405-11	CARBON	100	5%	1/4W	
R370	1-249-417-11	CARBON	1K	5%	1/4W	
R371	1-249-432-11	CARBON	18K	5%	1/4W	
R372	1-249-465-11	CARBON	47K	5%	1/4W	
R373	1-249-436-11	CARBON	39K	5%	1/4W	
R374	1-249-432-11	CARBON	18K	5%	1/4W	
R375	1-249-405-11	CARBON	100	5%	1/4W	
R376	1-249-417-11	CARBON	1K	5%	1/4W	
☛ R377	1-249-437-11	CARBON	47K	5%	1/4W	
R378	1-249-433-11	CARBON	22K	5%	1/4W	
R379	1-249-430-11	CARBON	12K	5%	1/4W	
R380	1-249-405-11	CARBON	100	5%	1/4W	

-W BOARD- Page 93

☛	*1-629-149-12	W BOARD *******			
		CAPACITOR			
C1400	1-136-169-00	FILM	0.22MF	5%	50V
C1401	1-136-153-00	FILM	0.01MF	5%	50V
☛ C1402	1-126-101-11	ELECT	100MF	20%	16V
C1403	1-102-074-00	CERAMIC	0.001MF	10%	50V
☛ C1404	1-126-101-11	ELECT	100MF	20%	16V
C1405	1-123-875-11	ELECT	10MF	20%	50V
C1406	1-124-902-00	ELECT	0.47MF	20%	50V

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Ref.No.	Part No.	Description				Remark
R1416	1-249-429-11	CARBON	10K	5%	1/4W	
R1417	1-249-433-11	CARBON	22K	5%	1/4W	
R1418	1-249-439-11	CARBON	68K	5%	1/4W	
R1419	1-249-440-11	CARBON	82K	5%	1/4W	
R1420	1-249-441-11	CARBON	100K	5%	1/4W	
☛ R1421	1-247-881-00	CARBON	120K	5%	1/4W	
		CONNECTOR				
W1	*1-565-482-11	CONNECTOR, BOARD TO BOARD 6P				
☛ W2	*1-564-508-31	PLUG, CONNECTOR 5P				

-XA BOARD- Page 93

	*1-629-151-11	XA BOARD ********			
		CAPACITOR			
C1300	1-101-005-00	CERAMIC	0.022MF		50V
C1301	1-101-888-00	CERAMIC	68PF	5%	50V
C1302	1-101-884-00	CERAMIC	56PF	5%	50V
C1303	1-102-942-00	CERAMIC	5PF	1PF	50V
C1304	1-102-947-00	CERAMIC	10PF	0.5PF	50V
C1305	1-102-947-00	CERAMIC	10PF	0.5PF	50V
C1306	1-102-951-00	CERAMIC	15PF	5%	50V
C1307	1-102-951-00	CERAMIC	15PF	5%	50V
☛ C1308	1-126-101-11	ELECT	100MF	20%	16V
C1309	1-102-125-00	CERAMIC	0.0047MF	10%	50V

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